# 6.

# Coordinating Federal, State, and Local Controls and Payment Requirements

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The institutional setting of mineral management on Federal land—that is, the division of authority horizontally among the Federal agencies and vertically between the Federal and State governments—is as critical as the substantive content of the laws.

The division of authority among the Federal agencies has been based on a questionable distinction between “mineral” or “economic” aspects and “nonmineral” or “land management” aspects of natural resource management, with adverse effects on efficient, integrated management of Federal resources.

The States have considerable authority under the Federal mineral laws to regulate and tax private mineral activities on Federal land. Except for the States’ anachronistic authority over tenure requirements under the Mining Law, the present structure of Federal and State regulatory authority seems to be working fairly well, although continued improvements in coordination would be helpful. Current methods and levels of State taxation, however, may cause waste of Federal mineral and nonmineral resources.

State mineral taxes can and apparently do provide enough revenue to cope with the adverse socioeconomic impacts of mineral activities. The problem is timely distribution of a State’s revenues to its impacted communities. Federal mineral revenues provided to the producing States are not needed and so far have not been used to cope with adverse socioeconomic impacts and, therefore, subsidize the general spending programs of these States.

## A. Federal Interagency Coordination

### 1. Agency Responsibilities Prior to Enactment of the Department of Energy Organization Act

All minerals in Federal land, except uranium leased on certain types of land by the Department of Energy and common-variety minerals (sand, gravel, etc.) sold by the Department of Agriculture on land under its jurisdiction, are disposed of under laws administered by the Department of the Interior.

The Secretary of the Interior's authority under the Mining Law generally is limited to determining whether valuable mineral deposits have been discovered by a mining claimant and to requiring limited mitigation of the mineral activity's impact on nonmineral resources before a patent is issued. The authority to require limited mitigation of impact on nonmineral resources is shared with the Secretary of Agriculture for national forest land. No coordination problems have yet arisen, since only the Secretary of Agriculture has actually issued regulations requiring mitigating measures to be undertaken. [1]

For minerals subject to disposal under the mineral leasing laws, the Secretary of the Interior has broad authority to establish procedures for mineral lease acquisition, approve or disapprove lease applications, insert lease conditions, require diligent exploration and development, set rentals and royalties, approve or disapprove mining plans, and generally take whatever actions he deems necessary to promote efficient and competitive mineral operations that take into account optimum use of all mineral and nonmineral resources on Federal (and non-Federal) land. The Secretary's authority has been delegated to and is split between two Interior agencies: the Bureau of Land Management (BLM) and the U.S. Geological Survey (USGS). (The new Office of Surface Mining has been given responsibility for supervising reclamation of the surface impacts of coal mining on Federal lands.)

The current division of responsibilities between BLM and USGS for mineral leasing on onshore Federal land is specified in Secretarial Order No. 2948.[2] Generally, the order makes BLM responsible for (a) deciding whether mineral leases will be issued and (b) formulating lease requirements for nonmineral resource protection and reclamation, It makes USGS responsible for (c) formulating lease requirements for diligent mineral activities and payments for mineral value and (d) supervising and inspecting mineral operations under a lease.

More specifically, BLM is responsible for processing lease applications, formulating lease requirements for nonmineral resource protection and reclamation, issuing leases or disapproving lease applications, handling and recording lease transactions, approving or disapproving surface uses outside the actual operating area defined in an exploration or mining plan, collecting rentals, and conducting inspections to ensure compliance with nonmineral resource protection requirements outside the operating area.

USGS, on the other hand, is responsible for identifying and classifying known mineral areas, evaluating specific mineral resources prior to lease issuance, providing geologic, engineering, economic, and other technical mineral resource expertise to BLM, formulating engineering and economic lease requirements (rentals, royalties, bonds, unit values, parceling, diligent development, conservation, minimum production, and all other operating requirements), collecting royalties, supervising mineral operations, approving or disapproving exploration and mining plans in the leased area, conducting inspections to ensure compliance with all (mineral and nonmineral)

[1] See ch. 5, subsec. D(2)(b).

[2] U.S. Department of the Interior, "Division of Responsibility Between the Bureau of Land Management and the Geological Survey for Administration of the Mineral Leasing Laws--Onshore," Secretarial Order No. 2948, Oct. 6, 1972.

lease requirements in the operating area, and ordering remedial action or referring leases to BLM for cancellation because of noncompliance with lease requirements.

In sum, BLM is primarily responsible for the multiple-use land management aspects of mineral leasing, while USGS is primarily responsible for the technical mineral operation aspects, Thus, BLM has the responsibility for approving leases and USGS has the responsibility for approving exploration and mining plans under leases, but neither agency can grant an approval that is inconsistent with the recommendations of the other agency in the other agency's primary area of responsibility. Disagreements are resolved by the Assistant Secretaries responsible for each agency, or, if the Assistant Secretaries should disagree, by the Under Secretary.

One apparent flaw in the Secretarial order is the complete removal of BLM from the supervision and inspection of the mineral operation's effects on nonrnineral resources after a lease has been issued. BLM, not USGS, is the agency with the nonmineral resource expertise, but USGS is given sole authority for supervising mineral operations and conducting inspections to assure compliance with all mineral and nonminerUI lease requirements in the operating area.

A less obvious flaw in the Secretarial order is the questionable distinction it draws between the mineral resource aspects of mineral leasing, which are made the sole responsibility of USGS, and the multiple-use land management aspects, which are made the sole responsibility of BLM, at least prior to issuance of a lease (see the previous paragraph), As is discussed in chapter 4,] many of the "mineral engineering and economics" terms and conditions of a mineral lease (payment, diligent exploration and development, mineral conservation, minimum production, continuous production, and other performance requirements and incentives), if improperly specified, can result in substantial unnecessary damage to nonmineral resources and prevention or disruption of nonmineral resource planning, development, and management.

In practice, USGS and BLM have overcome these flaws by blurring the sharp distinctions made in the Secretarial order, at least when the land being leased is under the jurisdiction of BLM rather than some other surface management agency (e.g., the Forest Service). Working agreements entered into by the two agencies generally maintain the specified division of expertise, but recognize that each agency's expertise is insufficient to carry out its designated functions. The agencies pool their expertise to draw up lease terms and conditions (e.g., rentals, royalties, bonds, diligence requirements, and environmental protection and reclamation conditions), evaluate resources and select tracts for leasing, review operating plans, and conduct lease inspections. [4]

USGS's responsibilities under the Federal mineral laws are handled by a distinct division, the Conservation Division, whose only other responsibility is the identification and classification of water powersites. BLM's mineral responsibilities, on the other hand, although focused in its Division of Minerals Management, necessarily draw upon the full expertise of the agency in land and resources management. Both the USGS Conservation Division and BLM administer the leasing of phosphate, potash,

[3] Ch. 4, subsecs. F(3) and F(4).

[4] U.S. Bureau of Land Management and U.S. Geological Survey, "Cooperative Procedures Pertaining to Onshore Oil, Gas and Geothermal Resources Operations," Aug. 29, 1975, and "Working Agreement, BLM-GS Onshore Mineral Lease Operations Exclusive of Oil, Gas, Geothermal, and Oil Shale," Nov. 24, 1976.

sulfur, sodium, geothermal steam, and the fossil fuel minerals on public domain land and the leasing of all minerals on acquired land. BLM is solely responsible for administering claims to nonleasable minerals under the Mining Law on public domain land.'

The national offices of the USGS Conservation Division and BLM provicie overall policy and guidance for the administration of mineral activities on Federal land. The actual detailed administration of individual leases, however, including tract selection, rentals, royalties, bonds, formulation of lease terms and conditions, issuance of leases, approval of operating plans, and supervision and inspection of operations, is handled by field offices of the two agencies scattered throughout the United States. Only the field offices have the detailed knowledge of mineral and nonmineral resources in an area necessary for responsible decisions on whether to lease and under what conditions.

BLM has 11 State offices and 56 district offices in the 11 contiguous Western States and Alaska, which contain 93 percent of the onshore Federal land, and an Eastern States' office with two satellite offices. These State and district offices are responsible for the management of all mineral and nonmineral resources on 470 million acres of BLM land, which constitute about 62 percent of the total onshore Federal landholdings, and for the management of the mineral resources only on the 290 million acres of onshore Federal land controlled by other Federal agencies and the 63 million acres of non-Federal onshore land for which the Federal Government has reserved all or some mineral rights.

The USGS Conservation Division has 3 regional offices, 6 Area Oil and Gas Supervisor offices with 13 subsidiary district offices, 6 Area Mining Supervisor offices with 7 subsidiary district offices, 7 Area Geologist offices with 6 subsidiary district offices, an Area Geothermal Supervisor office with 3 subsidiary district offices, and an Area Oil Shale Supervisor office with no subsidiary district offices. The Area Supervisor and Geologist offices, with their subsidiary district offices, work with the BLM State and district offices to gather mineral resource data and manage mineral activities on all 760 million acres of Federal onshore land and the 63 million acres of non-Federal onshore land for which the Federal Government has reserved all or some mineral rights.

The area and district offices of the Area Oil and Gas, Geothermal, and Oil Shale Supervisors have responsibility for management of onshore oil and gas, geothermal steam, and oil shale, respectively. The area and district offices of the Area Mining Supervisors have responsibility for the management of all other onshore leasable minerals: coal, phosphate, potash, sodium, and sulfur on public domain land and all minerals (other than oil, gas, geothermal steam, and oil shale) on acquired land, The area and district offices of the Area Geologists provide geologic expertise for management of all onshore minerals.

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'The United States Geological Survey Conservation Division and BLM are responsible for offshore (OCS) mineral leasing, under divisions of responsibility very similar to those described in the text for onshore leasable minerals. The offshore mineral leasing programs are administered in both agencies by program offices distinct from those administering onshore mineral programs, and overall policy direction is provided by the Assistant Secretary of the Interior for Program Development and Budget, rather than by the Assistant Secretaries responsible for USGS and BLM.

For the 290 million acres of onshore Federal land under the surface management of an agency other than BLM, BLM's and USGS's mineral management activities are coordinated at the field level with the surface management activities of those agencies. The largest Federal land management agency other than BLM is the Forest Service, which manages 187 million acres of national forests and grasslands, or about 25 percent of the total onshore Federal landholdings. Other major Federal land management agencies include the Fish and Wildlife Service, the National Park Service, and the Bureau of Reclamation in the Department of the Interior (over 63 million acres total): the Armed Services, including the Corps of Engineers, in the Department of Defense (almost 31 million acres total): the Department of Energy (over 2 million acres, on which it conducts a uranium leasing program); and the Tennessee Valley Authority (almost 1 million acres)."

When a Federal agency other than BLM has jurisdiction over the surface of land to be leased for mineral activity, BLM ordinarily will issue the lease only with the consent of that agency and subject to nonmineral resource-related conditions it specifies. This deference to the surface management agency is founded on sound principles of multiple-use land management, As President Ford stated in one of his last reports to Congress: "It is not reasonable to assign land management responsibility to one department and, at the same time, empower another department to arrange and manage leases for one particular and major form of utilizing those assets."" However, perhaps because of oversight," an express requirement of consent by the surface management agency to issuance of leases for land under its jurisdiction was not included in the Mineral Leasing Act of 1920, Such a requirement has been included in all major revisions of or additions to the mineral leasing laws since 1940, Thus, a lease may be issued only with the consent of the surface management agency, and subject to such conditions as it may require to ensure adequate utilization of the land for the purposes for which it was acquired or is being administered, if the lease is on acquired (rather than public domain) land, if it is on land withdrawn or reserved for military use, if it is for geothermal steam in land under the surface jurisdiction of the Department of Agriculture or in land subject to an application for a Federal Energy Resources Commission permit or license, or if it is for coal in any Federal land.'

There is no obvious reason for preserving the distinction between those instances in which consent by the surface management agency is required and those in which it is not. The distinction can be explained only by reference to the history of the Federal mineral laws. As President Ford stated, the land management agency should have the power to veto mineral leases that will be detrimental to overall mineral and nonmineral resource management. Thus, the requirement of consent by the surface management agency should be extended to all mineral leases, together with the authority of the surface management agency to insert provisions in the lease to ensure proper balancing of mineral and nonmineral resource values and uses,

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[7]The acreage figures cited in this and the preceding paragraphs are from U.S. Bureau of Land Management, *Public Land Statistics, 1976*, tables 9 and 17 (1977).

[8]*The Organization of Federal Energy Functions, A Report From the President to the Congress*, January 1977, at 44 (hereinafter cited as *Ford Administration Energy Organization Report*).

[9]See the exchange among Representatives Hernandez, Ferris, and Lenroot in 53 Cong. Rec. 1224 (daily ed. Jan. 14, 1916).

[10]Reorganization Plan No. 3 of 1946, § 402, 60 Stat. 1099 (1946) and 30 U.S.C. § 352 (1976) (acquired land); 30 U.S.C. § 201 (a)(3)(A)(iii) (1976) (coal); ibid., § 1014(b) (geothermal steam); 43 U.S.C. § 158 (1976) (military land).

There are strong reasons for not only giving the surface management agency veto authority over mineral leasing, but also entrusting it with all or most of the mineral leasing function for land under its jurisdiction. First of all, responsibility for mineral leasing decisions would be clearly placed in one spot, rather than being split between BLM and the surface management agency, as occurs now. Controversial decisions, such as those related to the preference-right phosphate lease applications in the Los Padres and Osceola National Forests, could not be passed back and forth between the agencies, with each hoping the other would make the difficult decision. Second, the responsibility would be placed with the agency most familiar with the status of the land, the geology of and mineral activity on and around specific tracts, the legal restrictions (such as water power, watershed, or wildlife protections mandated by law) affecting the availability of mineral resources from those tracts, and the relative value of mineral and nonmineral resources on those tracts. Tract selection and evaluation for mineral leasing purposes could be based from the start on multiple-use evaluation and planning, which is the critical concern with, for example, the vast known deposits of Federal coal and oil shale, thereby avoiding wasted time and effort on tracts that will be vetoed by the surface management agency if initial selection is left to another agency, Third, if the surface management agency is given jurisdiction over the mineral resources as well as the nonmineral resources, it will have an incentive, now lacking, to give due weight to mineral resources in its resource inventory, management, and planning programs. Fourth, only such joint jurisdiction over mineral and nonmineral resources in a tract can assure the integrated total-resource perspective mandated by Congress in recent enactments such as the Geothermal Steam Act of 1970, the Federal Coal Leasing Amendments Act of 1976, and the Federal Land Policy and Management Act of 1976.

An objection may be raised that the surface management agencies do not have sufficent mineral expertise to accept responsibility for mineral leasing on their own land. But neither does BLM, which is now responsible for all mineral leasing. BLM relies on USGS for mineral resource evaluations and recommendations on mineral-related lease provisions. USGS could just as easily provide the evaluations and recommendations to the surface management agency.

There may also be an objection that the dispersion of mineral leasing authority to each surface management agency would prevent formulation of comprehensive mineral resource development programs, adoption of uniform procedures, and collection of comprehensive data on Federal mineral resources. But the data have always been in the local offices of the surface management agencies or have been collected by USGS and the U.S. Bureau of Mines rather than BLM, USGS could serve as the central repository of mineral resource and development information. It could also encourage uniformity through its mineral tract evaluations and recommendations on specific lease provisions, and an interagency committee chaired by USGS could draft standard forms and publish handbooks and other materials to share information and promote uniformit y.

Comprehensive mineral resource development programs are difficult to implement no matter who has responsibility for mineral leasing, particularly when, as is currently the case, each surface management agency has the express or de facto au-

thority to veto tracts selected for mineral leasing. Yet, removal of this veto authority could severely undermine multiple-use land management.

Moreover, if comprehensive mineral resource development programs for Federal land are to be meaningful, they must be based on realistic assessments of mineral resource potential and availability on Federal land, and they must be implemented through explicit linkages to land management and mineral research plans and programs. Only the surface management agencies, assisted by USGS, are in a position to assess the availability of mineral resources on Federal land in the light of geology, laws, administrative requirements, relative resource values, and so forth; and only they are in a position to implement development programs through the ongoing land management process.

Finally, comprehensive mineral resource development programs can be devised and implemented without divorcing the mineral leasing function from the land management process of which it is an integral part. A useful model is the resource assessment and long-range planning program mandated for renewable natural resources (for example, forest and range) by the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended. [10] The Act directs the Secretary of Agriculture to develop a long-range program for the Nation's renewable resources that will assure an adequate supply of such resources in the future while maintaining the integrity and quality of the environment, The Act specifically required an immediate assessment of the Nation's renewable resource situation and a recommended plan of action based on that assessment, followed by revised assessments every decade and revised plans every half-decade. The recommended plans are to be chosen from a set of alternatives encompassing the range of choices that could be made. The consequences of various courses of action, as well as the costs of implementing each alternative, must be described. Evaluation of the potential effect of proposed actions on the environment is an integral part of the planning process.

The assessments and plans are the responsibility of the Forest Service, and the plans provide national direction for all three arms of the Forest Service organization: the National Forest System, which administers the federally owned national forests and grasslands: State and Private Forestry, which assists and cooperates with managers of State and privately owned forest and related land; and Research, which finds improved ways to manage timber and forest rangelands.

The renewable resource assessment is based on aggregate data compiled by the Forest Service and other Federal agencies from various sources. It forms the basis for tentative policies, objectives, and goals for each arm of the Forest Service, and in particular for tentative renewable resources production goals for the National Forest System. These tentative goals are passed down through the regional, area, forest, and district offices of the System, where they are disaggregated and revised into successively more detailed objectives based on access to more detailed data on land resource status and capabilities and multiple-use considerations contained in local land management plans. Program proposals are formulated at the district level, where the most information is available, and percolate back up through the system until they are final-

[10] 16 U.S.C. §§ 1600-1614 (1976)

ly combined into a national program. Program actions and funding levels in the national program, once approved, are divided into allocations to the various districts.

The formulation and implementation of realistic mineral production goals for Federal land, if this were desired, would require a similar procedure. Tentative targets established by USGS or some more broadly scoped mineral policy agency, based on a national mineral supply-and-demand assessment and a plan for research, development, and production, would be a statutorily mandated part of the national direction for all Federal land management programs. Each Federal land management agency would be required to produce a recommended leasing program within a specified period of time (for example, 1 year) to meet its allocated portion of national mineral production. The recommended leasing program would contain explicit leasing schedules and acreages, broken down to the district level, and would be based on a discussion of alternatives and the fiscal, environmental, resource conservation, socioeconomic, and other consequences of each alternative. Should a recommended program deviate from the tentative targets established by the Mineral Policy Agency and be unacceptable to that agency, the President would make the final decision.

This procedure would permit establishment of a comprehensive mineral leasing program and would provide an effective mechanism for implementation of the program. At the same time, it would assure leasing schedules that were realistically based on detailed on-the-ground data and expertise and were consistent with balanced land management for optimum mineral and nonmineral resource use. Thus, realistic comprehensive mineral leasing programs may not only allow but also require the mineral leasing function to be integrated into the land management process of each surface management agency.

There is some question, however, whether "comprehensive mineral leasing programs" make sense. Unlike the renewable resources, the location of almost all mineral resources is unknown, so that the allocation of "leasing targets" is speculative. Even for those minerals, such as onshore coal and oil shale, which are known to exist in large quantities in certain areas, leasing does not automatically guarantee production. Consequently, leasing targets based on production goals are often no more than guesswork.

For all mineral leases, no matter which Federal agency has jurisdiction over the surface, USGS now has the primary and, in some instances, the sole responsibility for inspecting mineral operations under the lease and enforcing compliance with the lease terms and conditions, including terms and conditions inserted at the request of the surface management agency. (Surface impacts of coal-mining operations are the responsibility of the new Office of Surface Mining in the Department of the Interior.) It is not at all clear that USGS should have this responsibility. [11] One of the basic missions of USGS is the investigation, identification, and encouragement of development of the mineral resources of the United States. The agency responsible for inspecting mineral operations and enforcing compliance with laws, regulations, and lease terms designed to protect the Government's interest in its mineral and nonmineral resources probably

[11] U.S. National Aeronautics and Space Administration, *Onshore Lease Management Program Study for the U.S. Geological Survey* 73-74 (1974).

should not also be primarily responsible for furthering mineral investigation and development. Yet that is the position USGS is placed in, Similar conflicts in the recent past have led to removal of mine health and safety responsibility from the U.S. Bureau of Mines to the Mining Enforcement and Safety Administration (and most recently to the Mine Safety and Health Administration in the Department of Labor) and transfer of the U.S. Atomic Energy Commission's responsibilities for development and regulation of nuclear power to two separate agencies, one (the Department of Energy) responsible for development and the other (the Nuclear Regulatory Commission) responsible for regulation.

It seems that the surface management agency, which has responsibility for the nonmineral resources on the leased tract, should have at least joint, if not sole, responsibility for inspecting operations under the lease and enforcing lease terms, As was noted above, BLM has joint responsibility with USGS for land under BLM's jurisdiction, despite the provisions of Secretarial Order No. 2948.

### 2. The Effect of the Department of Energy Organization Act

The Department of Energy Organization Act, enacted in 1977, transferred certain aspects of onshore energy mineral leasing from the Department of the Interior to the new Department of Energy. The transfer is likely to create serious coordination problems and disrupt the trend toward integrated total-resource management, with only minimal, if any, contribution to the primary functions of the Department of Energy.

Subsection 302(b) of the Act transfers to and vests in the Secretary of Energy the functions of the Secretary of the Interior to promulgate regulations under the Federal mineral leasing laws and the Energy Policy and Conservation Act that relate to the—

(1) fostering of competition for Federal leases (including, but not limited to, prohibition on bidding for development right by certain types of joint ventures):
(2) implementation of alternative bidding systems authorized for the award of Federal leases;
(3) establishment of diligence requirements for operations conducted on Federal leases (including, but not limited to, procedures relating to the granting or ordering by the Secretary of the Interior of suspension of operations or production as they relate to such requirements);
(4) setting rates of production for Federal leases; and
(5) specifying the procedures, terms, and conditions for the acquisition and disposition of Federal royalty interests taken in kind.[13]

Subsection 302(b) transfers only the authority to issue regulations relating to the five listed functions. However, subsection 302(c) transfers the authority to actually establish production rates for each and every Federal lease, in addition to the authority transferred in subsection 302(b)(4) to issue regulations relating to establishment of such production rates.[14] Moreover, subsection 303(c) requires the Secretary of the Interior to afford the Secretary of Energy at least 30 days prior to publication or other prescription of the terms and conditions of any Federal lease in which to disapprove

[13] Ibid., at 52-85.
[14] 42 U.S.C. § 7152(b)(Supp. I 1977).
[14] Ibid., § 7152(c).

any term or condition of such lease that relates to any matter with respect to which the Secretary of Energy has authority to promulgate regulations under subsection 302(b), and no such term or condition may be included in such a lease if it is disapproved by the Secretary of Energy.]'

A "Federal lease" is defined as referring only to leases of oil, gas, coal, oil shale, tar sands, and geothermal resources[16]— that is, only the leasable energy minerals (except for uranium, which is leasable on acquired land and certain limited categories of public domain land).

The net effect is that the Secretary of Energy may dictate the terms and conditions of any Federal energy mineral lease as long as they relate to "competition" or "diligence" or other equally vague words, even though subsection 303(a) of the Act declares:

> The Secretary of the Interior shall retain any authorities not transferred under section 302(b) of this Act and shall be solely responsible for the issuance and supervision of Federal leases and the enforcement of all regulations applicable to the leasing of mineral resources, including but not limited to lease terms and conditions and production rates. No regulation by the Secretary [of Energy] shall restrict or limit any authority retained by the Secretary of the Interior under section 302(b) of this Act with respect to the issuance or supervision of Federal leases. [17]

Moreover, unlike the Secretary of Energy's veto over lease terms and conditions drafted by the Secretary of the Interior, the Secretary of the Interior is allowed only to ''comment" on the content and effect of regulations drafted by the Secretary of Energy. [18]

The transfer of authority to prescribe regulations relating to acquisition and disposal of Federal royalties taken in kind does not raise any apparent problems for continuing judicious land management by the Secretary of the Interior.

However, the other transfers could seriously affect the Secretary of the Interior's land management responsibilities, Although the transferred functions were presented by the administration as economic aspects of energy mineral leasing, distinct from the land management aspects, their exercise can have substantial adverse effects on nonmineral resource values.

The choice of a bidding system involves, among other things, a choice of using either the level of royalties (per-unit payments on the gross amount or value of production), the amount of the bonus (a lump-sum payment not tied to production), the profit share, or some other variable as the bidding element. The selection of the appropriate bidding system is important for the proper balancing of competition, diligence incentives, and so forth, which are legitimate concerns of the Department of Energy. But, as is discussed in detail in section E of chapter 4, the bidding system and its results can also greatly affect conservation of the mineral and nonmineral resources on Federal land, which is a major concern of the Secretary of the Interior. For example. royalty payments are a continuing per-unit overhead cost of mineral production that can be

[16] Ibid., § 7153(c).
[17] Ibid., § 7101(c).
[18] Ibid., § 7153(a).
[19] Ibid., § 7153(b).

absorbed only by the higher grade deposits in a lease. The higher the royalty, the higher the cutoff grade for production, and therefore the higher the amount of mineral left in the ground, even though all or some of that mineral could have been mined at a lower royalty rate. This part of the problem, it may be hoped, would be taken into account by the Department of Energy. However, there is another part of the problem that might be overlooked. The fact that more mineral is left in the ground means that either a greater amount of land must be mined (and disturbed) for a given quantity of mineral production or the same tract of land must be disturbed more than once (for example, under a subsequent lease at a lower royalty rate).

As is discussed in detail in subsection F(4) of chapter 4, mandatory production rates, continuous production requirements, rentals, work requirements, time limits, and other diligence requirements can have similar effects.

Production rate requirements that are based on or encourage overly rapid production, or development of only the most profitable energy mineral deposits (which is a serious potential problem with respect to each energy mineral resource), can result in leaving behind less profitable but nonetheless economically recoverable energy and associated nonenergy mineral deposits. Thus, once more either additional land must be mined or the same tract must he mined twice to achieve a given quantity of energy and nonenergy mineral production. In either case, needless damage is inflicted on the land resource. If more land is mined rather than mining the same tract twice, as will often happen because of the lower quality of the unmined mineral, then minerals (both energy and nonenergy) that could have been recovered will never be produced. The Secretary of Energy will be responsible only for the energy mineral recovery. The Secretary of the Interior must be concerned about the adverse effects on the land and on nonenergy mineral recovery, both of which remain his responsibility.

Rentals combine diligence and land use payment features. Rentals that are designed only to ensure diligence and do not charge for the temporary or permanent loss of nonmineral resource values caused by the mineral activity result in underpricing of the mineral in relation to the true total costs of its production and therefore encourage both overproduction of the mineral and excessive damage to nonmineral values.

Overly stringent diligence or minimum production requirements can force excessive mining activity and thus increase the damage to nonmineral resources, including the local socioeconomic fabric in sparsely populated regions. On the other hand, inadequate diligence or rental requirements permit large amounts of land to be held for mineral speculation, thereby increasing nonproductive lease transaction and management costs, disrupting long-range planning of nonmineral land uses, and discouraging investment in nonmineral resource activities on the leased land.

Clearly, the transferred functions are not merely economic aspects of leasing, distinct from overall resource and land management. The formal distinction drawn between eocnomic and land management issues does not exist in practice. As was shown in subsection A(I), the effort to draw a similar distinction in defining the respective responsibilities of USGS and BLM in the Department of the Interior, under Secretarial Order No. 2948, has not worked and has led to adoption of working agreements providing for joint responsibility.

The adoption of the distinction in the Department of Energy Organization Act is the consequence of historical circumstance. The outgoing Ford administration recognized the inseparability of all aspects of mineral leasing from proper land management. Its report to Congress on the organization of Federal energy functions stated: "Energy leasing and lease management functions of the Bureau of Land Management and U.S. Geological Survey are inherent in the responsibility for managing, preserving, and appropriately utilizing the [Federal] lands."[19] The Department of Energy Act proposed by the Ford administration did not transfer any energy mineral leasing function to the Department of Energy.[20]

However, incoming officials of the Department of the Interior under the new Carter administration, unfamiliar with the complex details of mineral leasing, accepted the questionable distinction between the economic and the land management aspects of mineral leasing, and they therefore agreed to the transfer of the economic aspects to the new Department of Energy. Hearing no complaint from the Department of the Interior, Congress enacted the transfer. (Some other, more obvious potential incursions on the Secretary of the Interior's land management responsibilities were modified or eliminated. ]

The transfer inserts the Secretary of Energy into the middle of the energy mineral leasing process, The Secretary is necessarily an energy advocate. He can be expected to formulate regulations and to veto lease terms from the perspective of increased energy production rather than on the basis of total impact on energy mineral, nonenergy mineral, and nonmineral resources,[21] even though the functions transferred to him can and do have substantial impact on all three types of resources.

The transfer runs counter to the trend of recent legislation, such as the Geothermal Steam Act of 1970, the Federal Coal Leasing Amendments Act of 1976, and the Federal Land Policy and Management Act of 1976, which adopt a total resource perspective in the management of Federal land and its minerals. 'z The Secretary of Energy is not given similar authority with respect to production of water power from Bureau of Reclamation dams, which serve multiple-use purposes and whose water is controlled for various energy and nonenergy purposes based on multiple-use considerations.

Moreover, the broad wording of the transfer will almost surely create coordination problems between the Department of Energy and the Department of the Interior. Many lease terms and conditions, such as rentals or bonds, are primarily useful for land management purposes but also intentionally or unintentionally may have effects on diligence or competition. [23] Can the Secretary of Energy control all such lease terms and conditions? What lease term does not affect diligence or competition? The debate over respective jurisdictions is likely to cause considerable delays and even stalemates in energy mineral leasing.

The transfer also creates strange allocations of responsibility in certain situations, The Secretary of the Interior is left with a meaningless role with respect to ener-

[19] *Ford Administration Energy Organization Report*, note 7, at 44.
[20] Ibid., at 59-78.
[21] Ibid., at v-vi, 33-34, 44.
[22] See, e.g., ch. 2, sec. F.
[23] See ch. 4, subsec. C[3](b)

gy mineral leasing on land under the surface jurisdiction of a non-Interior agency. As was noted in subsection A(I), when an agency other than BLM has jurisdiction over the surface of the land to be leased, BLM ordinarily will issue the lease only with the consent of, and subject to surface protection conditions specified by, that agency. The consent must be obtained and the conditions must be included if the mineral lease is on acquired land or land withdrawn or reserved for military purposes, or if it is for geothermal steam or coal. Thus, the non-Interior agency controls the surface aspects, and the Secretary of Energy controls the mineral aspects of the lease, leaving BLM with only the paperwork. On nonmilitary public domain land, on the other hand, BLM can override the surface management agency with respect to surface stipulations for noncoal and nongeothermal energy mineral leases, even though it has no interest in the surface or the energy minerals (the latter being controlled by the Department of Energy).

Finally, there appears to be no strong reason for the transfer, particularly in light of all the difficulties it causes. The two main problems with energy mineral leasing in the past have been inadequate supervision of lessees' mineral activities to ensure diligence and compliance with other lease requirements, and inadequate attention paid to environmental and other nonmineral resource impacts. [24] Insufficient leasing of energy minerals has not been the problem. Vast acreages of Federal onshore land are under lease for coal, oil and gas, and even geothermal steam. " As the Ford adminstration stated, "the policies established by the Administration in support of accelerated recovery of energy resources on Federal lands coupled with the longstanding Department [of the Interior] policy in support of utilization and development of the Federal lands . . . do create a general bias within the Department toward energy resource development. [26] Moreover, the transfer does not address any perceived insufficiency in leasing, because it clearly leaves the decision whether to lease with the Secretary of the Interior.

The transfer does not address the problem of inadequate protection of nonmineral resource values.

The transfer appears to address the problem of inadequate diligence and competition. However, it is not clear that the Department of Energy, which is an amalgam of the Federal Energy Administration (FEA), the Energy Research and Development Administration (ERDA), and other energy agencies and functions, will be any tougher on the energy industry than its constituent elements have been in the past.

Even if the Department of Energy should maintain a tough position, the impact on energy mineral production is likely to be small. Strict diligence requirements will result in abandonment of leases more often than in increased production, since production decisions depend primarily on the market. Any increased production that does result will often be at the expense of maximum ultimate recovery and conservation of resources.[27]

In sum, the energy mineral leasing provisions of the Department of Energy Organization Act reflect an oversimplified view of the tremendous complexity of land man-

[24] See subsec. A(1) and ch. 4 and 5.

[25] See U.S. Bureau of Land Management, *Public Land Statistics, 1976*, table 78 (1977); ch. 4.

[26] *Ford Administration Energy Organization Report*, note 7, at 34.

[27] See ch. 4, subsec. F(4).

agement for various mineral and nonmineral resource uses. The split jurisdiction they established is based on a distinction between economic and land management issues that does not exist in practice, The split will likely result in serious coordination problems, with resultant delay, inefficiency, and adverse environmental and socioeconomic impacts. The authority gained by the Secretary of Energy does not seem all that essential to the mission of his Department, but it could cause significant land management problems for the Secretary of the Interior.

The Secretary of Energy's important interest in general policy issues relating to energy development on Federal onshore land might be more appropriately addressed through the Leasing Liaison Committee established by section 210 of the Act.[28] As the Ford administration concluded, involvement in the details of the leasing process seems both unnecessary and unwise.[29]

## B. State and Local Concerns Regarding Mineral Activities on Federal Land

### 1. The Magnitude of the Federal Land Presence in the West

Onshore Federal land is a very significant portion of the total national land base. In 1975, the Federal Government owned one-third of the Nation's land, not including reserved mineral interests in 63 million acres.") Even after the massive transfer of about 149 million acres to the State of Alaska and the Alaskan Natives is completed (only 12 million acres were listed as transferred in 1975),[31] more than 27 percent of the Nation's land (30 percent if the reserved mineral interests are included) will be owned by the Federal Government.

Over 90 percent of the Federal onshore land is in the 11 contiguous Western States and Alaska. The Federal acreage amounted to 64 percent (69 percent including reserved mineral interests) of the total land in these States in 1975, and it will amount to 51 percent (56 percent including reserved mineral interests) after the extensive land transfer in Alaska is completed. The Federal ownership percentage for individual States is listed in table 6.1 and ranges from 29 percent (30 percent including reserved mineral interests) in Washington to 87 percent in Nevada. The percentages for total Federal mineral acreage are actually higher than those listed in table 6.1, since the data on 7 million acres of mineral interests reserved in these States since 1948 are not broken down by State and thus could not be included in table 6.1. A similar high percentage of Federal ownership exists for coal deposits in western North Dakota, although the percentage of Federal ownership in the State as a whole is less than 16 percent.

[28] 42 U.S.C. § 7140 (Supp. I 1977).

[29] *Ford Administration Energy Organization Report*, note 7, at 34, 44.

[30] Based on data in U.S. Bureau of Land Management, *Public Land Statistics, 1976*, tables 7 and 17 (1977).

[31] Ibid. Only 1 million of the 13 million non-Federal acres listed in table 7 of *Public Land Statistics* were privately owned. The remaining 12 million represent transfers to the State of Alaska. See app. B to this report.

[32] See the sources cited in the two previous footnotes.

Table 6.1 .—Federal Land and Mineral Ownership in the Western States

| State | Percentage of land owned by U.S. in 1975 | Percentage in 1975 including mineral Interests reserved before 1949 |
|---|---|---|
| Alaska | 96 (59)* | 96(59)* |
| Arizona | 43 | 47 |
| California | 45 | 48 |
| Colorado. | 36 | 45 |
| Idaho. | 64 | 67 |
| Montana | 30 | 42 |
| Nevada | 87 | 87 |
| New Mexico | 34 | 45 |
| Oregon | 53 | 55 |
| Utah | 66 | 68 |
| Washington | 29 | 30 |
| Wyoming | 48 | 68 |

*The percentage given in parentheses for Alaska indicates Federal landownership after completion of transfers to the State and the Natives.

SOURCE: Derived from data in U.S. Bureau of Land Management, *Public Land Statistics, 1976*, tables 7 and 17 (1977) and data in app. B.

The percentage of land and mineral interests actually owned by the Federal Government in these States, although high, does not indicate the full extent of the Federal influence over and even control of land use and economic activity in the States. Although much of the Federal land in the West is in large continuous blocks, a substantial amount of Federal acreage is in "checkerboard" tracts—sections of Federal land alternating with sections of railroad or State school grant land—or is otherwise interspersed with parcels of private and State land. Figure 2.1 in chapter 2, which depicts the principal Federal landholdings in 1976, including areas of interspersed ownership containing at least 25 percent Federal land but not including federally reserved mineral interests, gives a more complete picture of the extent to which Federal landholdings influence life in the Western States.

Given the magnitude of the Federal land presence in the West, it is only natural that the Western States should be extremely interested in the effects that mineral activity on Federal land might have on the physical, social, and economic environment.

## 2. State and Local Concerns About Direct Physical Impact

The direct impacts of mineral activity on surface resources and the physical environment, and the importance of the nonmineral resources on Federal land from both commercial and noncommercial points of view, are discussed in detail in chapter 5. Because much of the economy and lifestyle of the Western States depends on the preservation of their nonmineral natural resources, these States and their citizens have insisted that mineral activity on Federal land be conditioned on restoration of all nonmineral values and on preservation of those nonmineral values not capable of being restored.

One particularly critical area of State and local concern has been the impact of mineral activity on the quality and quantity of water, which is scarce and therefore ex-

[1]See ch. 5, secs. A, B, and C.

tremely valuable in the Western States. Water is required in varying amounts for mining and related energy development activities, and its use for those activities can substantially reduce the quantity and quality of water available for nonmineral resource activities. Moreover, some mineral deposits—for example, some coal deposits—themselves serve as aquifers, so that mining of the deposits could destroy or severely damage the existing water collection and recharge system. [34]

Another area of State and local concern is the limited protection afforded to private owners of former Federal land whose ownership is subject to a reservation by the Federal Government of some or all minerals in the land. Generally, the private surface owner cannot prevent development of the federally reserved minerals and is entitled legally only to reimbursement for damages to crops, agricultural improvements, and the value of the land for grazing purposes.[35] Moreover, for minerals subject to the Mining Law rather than the leasing laws, a mineral explorer may and (because of the provisions for acquisition of tenure) almost always will enter onto privately owned surface and commence operations without any prior notice to the surface owner or the Federal Government, Needless to say, conflicts can and sometimes do occur. [36]

### 3. State and Local Concerns About Indirect (Socioeconomic) Impact

In addition to the direct effects on the physical environment, mineral activities on Federal land can have substantial impacts on State and local economies and ways of life. These impacts can be both beneficial and adverse.

Mineral activities depend on the existence of an adequate infrastructure of facilities and services to support the mineral operations.[37] This infrastructure includes the transportation network; housing; health services such as hospitals; utilities; retail outlets such as grocery stores; and other public and commercial facilities and services required to support the population of a given geographic area.

When additional mineral activities are undertaken in an area that already has a substantial population and an extensive infrastructure, the incremental demand on existing facilities and services may be comparatively small. The additional activity usually can be easily absorbed. Beneficial effects are perceived as outweighing adverse consequences for the local social structure,

On the other hand, when mineral activities are undertaken in a sparsely populated rural area that has only minimal infrastructure, the incremental demand on existing facilities and services can be considerable, Although judging the nature and extent of social and economic impacts is a complicated process, past experience suggests that, in these cases, the adverse effects sometimes outweigh the beneficial ones, Large-scale mineral activities inevitably alter the local economy and bring about changes in the traditional way of life.

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[34] U.S. Water Resources Council, *Water for Energy Self-Sufficiency*, ch. 3 (October 1974); Federation of Rocky Mountain States, Inc., *Energy Development in the Rocky Mountain Region: Goals and Concerns* 34, 42-44, 85-87 (1975); Nehring and Zycher, *Coal Development and Government Regulation in the Northern Great Plains: A Preliminary Report*, RAND Corp. Rept. No. R-1981-NSF/RC, at 62-65, 83-85, 101-104 (August 1976).

[35] Mall, "Federal Mineral Reservations," 10 *Land & Water L. Rev.* 1, 21, (1975); see ch. 5, subsec. D(6) and E(6).

[36] See ch. 5, subsec. D(8).

[37] See ch. 2, subsec. D(6).

State and local concerns about these indirect effects are greatest in the Rocky Mountain and Great Plains regions and in Alaska, where extensive development of fuel minerals is projected. These are all sparsely populated regions; for the maintenance of their economies, they are dependent on farming, ranching, tourism, hunting, fishing, hiking, and other dispersed activities, as well as on mineral development. The projected scale of fuel mineral development is far greater than any past mineral activities and would markedly alter local and regional economies and living patterns.

The greatest projected development is for Wyoming, western Colorado, northeastern Utah, and northwestern New Mexico, where potential fuel mineral developments overlap one another. Any oil shale development will occur in northwestern Colorado and adjacent areas in northeastern Utah and southwestern Wyoming. Major coal development will occur in the same areas plus northwestern New Mexico, western North Dakota, and eastern Montana and Wyoming. Known deposits of uranium are scattered widely throughout Wyoming, western Colorado, New Mexico, Arizona, southern Utah, and southwestern Nevada, In addition, oil and gas development is concentrated in Wyoming, northern Colorado, northeastern Utah, and northwestern New Mexico.

An inevitable result of this development will be regionwide population changes. One 1975 study estimated that the development of coal, oil shale, and uranium deposits in the Rocky Mountain region could each attract some 150,000 permanent residents or a total of up to half-a-million people by 1985. [38] A more recent assessment estimates that between now and the year 2000, the population increase caused by fuel mineral development in the eight Western States will range from 768,000 to 1,248,000 people.") The impacts of these population changes will be greatest far from metropolitan centers in the rural areas near energy development projects. Increases as great as 600 percent through the year 2000 are projected for some local areas.

An example of the results of large-scale mineral and energy development is Sweetwater County, Wyo. Rapidly expanding oil and gas development, new trona (sodium carbonate) mining, and construction of the Jim Bridger powerplant boosted the population of Sweetwater County from 18,000 in 1970 to 37,000 in 1974. Most of the population influx occurred in and around the town of Rock Springs, which had a population of only 11,000 in 1970.

The town and county were overwhelmed. Schools, health facilities, housing, recreation facilities, retail stores, telephone facilities, and municipal services such as fire and police protection, water, sewers, and sanitation were inadequate. No funds were available for needed expansion and improvement. Much of the new population settled in mobile homes and substandard housing in scattered developments on the fringe of Rock Springs, Alcoholism, drug use, crime, divorce, suicide, and other indicators of social stress all rose dramatically. [40]

[38] Federation of Rocky Mountain States, note 34, at 19-29; see Northern Great Plains Resources Program, *Socio-Economic and Cultural Aspects Work Group Report* (June 1974).

[39] I. White, et al., 2 *Energy From the West: A Progress Report of a Technology Assessment of Western Energy Resource Development* 864 (1977) (proposed for the U.S. Environmental Protection Agency).

[40] University of Denver Research Institute, *The Sweetwater County Boom: A Challenge to Growth Management* (July 1974); U.S. General Accounting Office, *Rocky Mountain Energy Resource Development: Status, Potential, and Socioeconomic Issues*, EMD-77-23, July 13, 1977, at 32-35 (hereinafter cited as *GAO Socioeconomic Issues Study*).

One of the most widely publicized examples of the effects of rapid development is seen in Alaska in connection with the construction of the Trans-Alaska Pipeline. Fairbanks became the staging, management, and service center for construction activities. It was the northernmost terminus of the railroad and paved highway prior to the building of the North Slope Haul Road to Prudhoe Bay. In 1970, the population of Fairbanks and the surrounding North Star Borough was 45,864; in 1975, it was estimated to be 63,350—a 24.8-percent increase. An accurate count of the population changes was never taken, however. At the peak of construction activities, the pipeline project employed 22,000 workers, 16,000 of them dispatched from the union halls in Fairbanks. More than 500 management personnel lived in the area; 1,164 workers were housed in a construction camp nearby.

As a result of this influx, a housing shortage occurred, with attendant increases in rents and purchase prices. The telephone company "ran out of numbers" and could add no new customers to the existing system. Electrical consumption grew faster than the electric utility's generating capacity. During the winter of 1975-76, "peakload alerts" were issued calling for consumers to restrict their use of electricity.

But not all of the expected impacts came to pass. For the school year 1974-75, the school district had expected 11,994 students, 3,150 more than the 8,844 projected without pipeline development. That fall 8,864 actually enrolled. Anticipated squatter communities did not arise since some individuals who traveled to Fairbanks brought trailers or campers in which to live while others moved in with friends and acquaintances. "Sleeping rooms" or "dormitories"-beds placed in available space in homes—and other kinds of shared-housing arrangements became available.'[1]

Similar difficulties were experiences in Valdez, Alaska, the southern terminus for the Trans-Alaska Pipeline. In January 1974, the population was l,350; by July 1975, it had risen to 6,512. A portion of the new residents were housed in specially prepared camps; even so, the population of the town itself had reached 3,500. All of the available services and utilities were inadequate, The sewer, water, telephone, and electric systems were all near capacity in 1974. For example, there were 12 circuits with 1,114 installed telephones; by January 1976, 32 more circuits and 4,262 new telephones had been added, but the system was still overloaded.

A shortage of housing was the greatest impact from the influx of new people. In July 1975, almost 60 percent of the residents were living in temporary housing. The cost of constructing permanent housing had risen to $90 per square foot and bank mortgages were hard to obtain. Some of the difficulties in constructing new housing stemmed from requirements retained after the relocation of the town following the 1964 earthquake and tsunami. Because the new town was built with urban renewal funds, the Department of Housing and Urban Development imposed strict regulations that resulted in legal entanglements concerning the sale and use of land and thus caused long delays in response to market demands for housing.

In spite of these dislocations, the majority of Valdez residents judged the pipeline boom in a favorable light. Surveys conducted in the spring of 1974 and replicated in

[1]Dixon, *What Happened to Fairbanks? The Effects of the Trans-Alaska Oil Pipeline on the Community of Fairbanks, Alaska* (1978)

the fall of 1975 revealed a generally high level of satisfaction with the changes in the community, Even most long-time residents who were not directly employed in pipeline-related industries and who were all affected by the adverse impacts favored continued development of the oil industry for Valdez, The final consequences of the construction of the pipeline are yet to be measured. Which of the short-term impacts will result in long-term changes can only be judged with the passage of more time.[42]

The "boom" occurrence is not the only concern of State and local officials and residents. Following the boom there is the possibility of a subsequent "bust" when labor-intensive construction activity is followed initially by production activity requiring many less workers and eventually, after 20 to 50 years, by termination of the product ion itself.

A variety of Federal, State, and local measures have been taken to deal with the social and economic impacts of mineral development. Some of the major sources of revenues for these programs are discussed in section E of this chapter. In general, Federal initiatives range from revenue sharing to specific mitigation program support, such as the National Institute of Mental Health training grant to the University of Wyoming for multidisciplinary human services teams to serve energy-impacted communities.[43] As is discussed more fully in sections D and E of this chapter, State programs range from the assessment and planning for mitigation of impacts as a precondition for energy development siting to the adoption of funding and enabling mechanisms for moderating impacts. [44] Local responses often are dependent on the existence of Federal and State support, although the instances of cooperation between local authorities and mineral development industries are growing. Examples of the latter are found in oil shale industry support of mitigation strategies in northwestern Colorado and the open planning process of community impact management adopted by an electric cooperative in eastern Wyoming. [45]

The emergence of these mitigation strategies demonstrates a growing recognition that the adverse effects of rapid growth induced by major mineral activities can be exacerbated if the growth is not managed. The effects of a rapid expansion in infrastructure are not only economic and social. Equally important are the environmental and land use consequences, Uncontrolled growth can, for example, resuIt in land use decisionmaking by default. It can lead to incursions into ecologically fragile areas which may preclude the best use not only of the land in question, but also of neighboring lands. Once such an incursion has been made, there may be no opportunity to reverse the process.

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[42] Baring-Gould and Bennett, "Social Impact of the Trans-Alaska Pipeline Construction in Valdez, Alaska 1974-75," testimony prepared for Canada's Mackenzie Valley Pipeline Inquiry (n.d.). See also, Baring-Gould, Bennett, and Heasley, "The Valdez Project: A Longitudinal Study of a Trans-Alaska Pipeline Boom Town," paper presented at the Pacific Sociologic Association meeting, San Diego, Calif., 1976.

[43] U.S. Department of Health, Education, and Welfare, Alcohol, Drug Abuse, and Mental Health Administration, "The Impact of New Boomtowns: The Lessons of Gillette and the Powder River Basin," *New Dimensions in Mental Health*, December 1977, at (ADM) 77-514.

[44] Peelle, "Mitigating Community Impacts of Energy Development: Some Examples for Coal and Nuclear Generating Plants in the United States," paper presented at the annual convention of the American Association for the Advancement of Science, Houston, Tex., January 1979.

[45] *Economic Impact of the Oil Shale Industry in Western Colorado*, hearing before the Subcomm. on Public Lands of the Senate Comm. on Int. & Ins. Affairs, 93d Cong., 2d sess. 12 (1974); Valeu, "Community Impact Management (Open Planning Process)—Case Study, Wheatland, Wyo.," paper presented at the annual convention of the American Association for the Advancement of Science, Houston, Tex., January 1979.

## C. State and Local Authority to Regulate or Tax Mineral Activities on Federal Land

Congress has complete power over Federal land under the Property Clause of the Constitution, which states: "The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States , . . ."[46] The Constitution also gives Congress the power to "make all Laws which shall be necessary and proper for carrying into Execution" its specifically enumerated powers,[47] and provides that "the Laws of the United States , . . shall be the supreme Law of the Land; . . . any Thing in the Constitution or Laws of any State to the contrary notwithstanding,[48]

The U.S. Supreme Court has held that these constitutional provisions give the Congress plenary authority over Federal land in any State, so that any law passed by Congress respecting the use, disposal, or protection of the Federal land will override or preempt any conflicting State law.[49] However, a State retains jurisdiction over Federal lands within its borders unless it has consented to the exercise of exclusive jurisdiction by Congress; therefore, the State may regulate activities on Federal land to the same extent as it regulates such activities on non-Federal land unless Congress has adopted a law preempting State regulation.[50]

A State cannot, without congressional consent, regulate or tax Federal instrumentalities (e.g., agencies). It may, however, regulate or tax private parties who do business with the Federal Government, as long as the regulation is directed to, or the tax is assessed on, the private party or interest and not on the Federal Government or its interests, unless the Congress has expressly immunized the private party or interest from State regulation or taxation, or unless the State regulation or taxation would "affect the title of the United States or embarrass it in using the lands or interfere with its right of disposal. "5[1]

Thus, a State can regulate and tax private activities on or interests in Federal land, including private activities under the Federal mining and mineral leasing laws and private interests in minerals acquired under those laws, unless such State regulation or taxation is in conflict with a Federal statute (or regulation adopted pursuant to such statute) or would "embarrass" or interfere with the United States' right to use and dispose of the land.

None of the Federal mining or mineral leasing laws expressly or implicitly preempts State regulation or taxation of private mineral activities on or interests in Federal land. In fact, the laws generally expressly preserve the States' jurisdiction over such activities and interests.

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[46] U.S. Const. art. IV, § 3, cl. 2.
[47] Ibid., art. I, § 8.
[48] Ibid., art. VI, cl. 2.
[49] *Kleppe* v. *New Mexico*, 426 U.S. 529 (1976).
[50] Ibid.
[51] *James* v. *Dravo Contracting Co.*, 302 U.S. 134, 142 (1937), quoting *Surplus Trading Co.* v. *Cook*, 281 U.S. 647, 650 (1930); L. Tribe, *American Constitutional Law* 254-255, 391-399 (1978).

The Mining Law of 1872, which was essentially a codification of State and local laws and practices, was designed to legitimize the appropriation and disposal of Federal minerals occurring under such laws and practices. [52] The Act declares that:

> All valuable mineral deposits in [Federal] lands . . . shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase . . . under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States. [53]

Under the Act, the regulation of possessor rights was left to local custom and rules so long as such rules were not inconsistent with the laws of the United States or of the State or territory in which the mining district was located. The Act established only a few requirements relating to the maximum and minimum sizes of a claim, the minimum amount of annual work, and the minimum location and discovery procedures.[54] The details, including the power to restrict the dimensions of claims to much less than the statutory maximum[55] and to impose more burdensome work requirements, [56] were left to State and local law and custom. The local customs and rules of the miners, which had been shaped, enforced, and sanctioned by State legislation even prior to 1872,[57] have since been almost completely superseded by State statutory requirements.[58] The States, therefore, exercise a substantial amount of control over the very disposal of Federal hardrock mineral rights under the Mining Law, at least in the absence of any Federal regulations inconsistent with the State requirements. Although the Federal lands are "free and open to exploration and purchase, " they are "free and open . . . according to the local customs or rules of [the State]. " The States may regulate and specify procedures for mineral entries, as long as such regulations are not inconsistent with Federal law[59] and do not frustrate the purposes of the Mining Law. [60]

At the opposite end of the location-patent process, it should be clear that a State may exercise its full police (regulatory) power with respect to patented mining claims, since the lands embraced in such a claim are no longer Federal lands. Even where the surface is retained by the United States, the patented mineral estate is private property and thus as fully subject to State regulation as any other private property in the State. In fact, the Mining Law even allows the States to condition the right to receive a patent for a claim: "As a condition of sale, in the absence of necessary legislation by Congress, the local legislature of any State or Territory may provide rules for working mines, involving easements, drainage, and other necessary means to their complete development; and those conditions shall be fully expressed in the patent. [61]

The possessor right under an unpatented mining claim is also a private property interest that can be regulated and taxed by the States. A holder of a valid unpatented claim has the exclusive right to mine the hardrock deposits in the claim without having to pay any royalties to or obtain any approval from the Federal Government, The U.S. Supreme Court has stated:

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[52] Swenson, "Legal Aspects of Mineral Resources Exploitation," in P. Gates, *History of Public Land Law Development* 699, 708-723 (1968).

[53] 30 U.S.C. § 22 (1976).

[54] Ibid., §§ 26, 28, 35.

[55] *Paley's Park Mining Co.* v. *Kerr*, 130 U.S. 256, 261 (1889); *North Noonday Mining Co.* v. *Orient Mining Co.*, 1 F. 522, 527-528 (C.C. Cal. 1880); *Rosenthal* v. *Ives*, 12 P. 904 (Idaho 1887).

[56] *Northmore* v. *Simmons*, 97 F. 386 (9th Cir. 1889).

[57] See *Jennison* v. *Kirk*, 98 U.S. 453 (1879).

[58] Trelease, Bloomenthal, and Geraud, *Cases and Materials on Natural Resources* 417, 464, 476-478, 484-485, 492-493, 508-509, 527 (1965).

[59] *Judson* v. *Herrington*, 162 P.2d 931 (Cal. App. 1945); 1 *Am. Law of Mining* § 7.5, at 106 (1960).

[60] *Butte City Water Co.* v. *Baker*, 196 U.S. 119 (1905).

[61] 30 U.S.C. § 43 (1976).

> [An unpatented mining] claim is property in the fullest sense of that term; and may be sold, transferred, mortgaged, and inherited without infringing any right or title of the United States, The right of the owner is taxable by the State; and is "real property. " . . . The owner is not required to purchase the claim or secure patent from the United States; but so long as he complies with the provisions of the mining laws, his possessor right, for all practical purposes of ownership, is as good as though secured by patent.[62]

The possessor right attached to an unpatented claim, therefore, is subject to State regulation as well as taxation, even if the State regulation is more stringent than applicable Federal regulations (e.g., the Forest Service mining regulations), as long as the State regulation is not inconsistent with Federal law and does not interfere with the Federal Government's right to dispose of its mineral land.[63]

In sum, the private property interest of a mining claimant under the Mining Law is subject to the full exercise of the States' police power. The Mining Law was intended as a codification and preservation of State regulation of the location and use of mining claims. Indeed the States are given substantial power over the actual process of acquisition of private rights under the Mining Law. Although a State cannot burden the acquisition process with unreasonable requirements or requirements inconsistent with Federal law, it may specify the details of the acquisition process and then fully regulate the resulting private property interest.

In contrast to the Mining Law of 1872, the Mineral Leasing Act of 1920 provides a detailed Federal management and disposal system covering acquisition of private mineral rights, retention of Federal ownership and control, payment of royalties and rentals, and specification of the speed and manner of exploration, development, and production. The States are given no role in the lease-issuance or maintenance-of-tenure process. However, two sections of the Leasing Act explicitly confirm the applicability of the States' police power to mineral activities under the Act. Section 32, after authorizing the Secretary of the Interior to prescribe all necessary and proper rules and regulations, states that:

> Nothing in this Act shall be construed or held to affect the rights of the States or other local authority to exercise any rights which they may have, including the right to levy and collect taxes upon improvements, output of mines, or other rights, property, or assets of any lessee of the United States.[64]

Section 30 directs the Secretary to insert in each mineral lease

> . . . provisions for the purpose of insuring the exercise of reasonable diligence, skill, and care in the operation of said property; a provision that such rules for the safety and welfare of the miners and for the prevention of undue waste as may be prescribed by said Secretary shall be observed; . . . and such other provisions as he may deem necessary . . . for the protection of the interests of the United States, for the prevention of monopoly, and for the safeguarding of the public welfare.

The section then declares that "None of such provisions shall be in conflict with the laws of the State in which the leased property is situated."[65]

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[62] *Wilbur* v. *United States ex rel. Krushnic*, 280 U.S. 306, 316-317 (1930).

[63] *State ex rel. Andrus* v. *Click*, 524 P.2d 969 (Idaho 1976); see *Forbes* v. *Gracey*, 94 U.S. 762 (1877).

[64] 30 U.S.C. § 189 (1976).

[65] Ibid., § 187.

The legislative history of these sections clearly indicates congressional intent to let the States' police power govern the operations of Federal mineral lessees, Although the primary focus was on health and safety matters, the States' police power was preserved with respect to all aspects of the public welfare, including but not limited to prevention of monopolies.[66] As Representative Mondell stated during the debate on the pertinent language in section 30, "Instead of being a limitation on the power of the Federal Government to protect [the public welfare], this is a limitation on the authority of the Federal Government to permit practices which the State law prohibits.'")[67] All participants in the debate agreed that the States could exercise their police power to enact requirements stricter than those in the Federal law; the disagreement arose over whether the section allowed the States to weaken the Federal provisions.

The authority of the States to impose stricter requirements on Federal mineral lessees than are imposed by the Federal Government itself has been recognized by the courts,[68] and Congress has recently reaffirmed this State authority with respect to reclamation of Federal land disturbed by coal mining.[69]

The Geothermal Steam Act of 1970 does not, as do the Mining Law of 1872 and the Mineral Leasing Act of 1920, expressly preserve the State police power with respect to private activities or interests under the Act. There is only a statement that "Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to its exemption from state water laws.[70] But, since the Act does not purport to preempt the States' police power, the States may, under the principles discussed at the beginning of this section, regulate private activities on and tax acquired private interests in Federal land under the Act, as long as such regulation or taxation is not in conflict with specific provisions in the Act or regulations promulgated pursuant to those provisions.

Federal laws other than the basic mining and leasing acts may contain provisions that limit the exercise of the States' police power with respect to mining activities on Federal land. For example, many of the Federal statutes providing for nonmineral entries on Federal land specifically reserved the mineral deposits in such land to the Federal Government, together with the right of miners to enter such land and develop the mineral deposits in accordance with the Federal mining or mineral leasing laws. The Acts provide for the payment to the surface owner of certain damages caused by prospecting and mining. " State statutes that attempt to condition the federally reserved right of access on the consent of the surface owner, or that seek to enlarge the damages recoverable by the surface owner, directly conflict with the Federal statutory provisions. However, there is no such conflict with respect to the reclamation requirements contained in State laws.[72]

Finally, there are constitutional limits to a State's exercise of its police power even in the absence of a Federal statute explicitly preempting that power. For exam-

[66] See, e.g., 58 Cong. Rec. 7643-7647 (Oct. 28, 1919).
[67] Ibid., at 7644.
[68] See *Mid-Northern Oil Co.* v. *Walker*, 268 U.S. 45 (1925); *Texas Oil & Gas Corp.* v. *Phillips Petroleum Co.*, 277 F. Supp. 366 (W.D. Okla. 1967), aff'd. 406 F.2d 1303 (10th Cir. 1969), cert. denied, 396 U.S. 829 (1969); cf. *Wallis* v. *Pan American Petroleum Corp.*, 384 U.S. 63 (1966).
[69] Surface Mining Control and Reclamation Act of 1977, § 505, 30 U.S.C. § 1255 (Supp. I 1977).
[70] 30 U.S.C. § 1021 (1976).
[71] Although the exact extent of recoverable damages under the acts is subject to dispute, it apparently would include at least damages to crops, agricultural improvements, and the value of the land for grazing purposes. Mall, "Federal Mineral Reservations," 10 *Land & Water L. Rev.* 1, 21 (1975).
[72] Ibid., at 51-54.

pie, the State regulation or taxation cannot discriminate against mineral activities on Federal land by imposing stricter burdens on those activities than are imposed on similar activities on non-Federal land in the State. If the State regulation is so restrictive as to amount to a taking of private property, the State must compensate the property owner for the value of the property taken. Overly burdensome State regulation or taxation that substantially discourages mineral development on Federal land might be held to be an invalid interference with the Federal power to dispose of Federal property. It should be noted, however, that extremely burdensome State regulation or taxation has been upheld against claims of unconstitutional taking of private property,[73] and that the congressional debate on passage of the Mineral Leasing Act of 1920 indicates that State taxation would be valid even if it were so burdensome as to preclude development of the Federal leasable minerals.[74]

## D. State and Local Regulatory Controls: Coordination With Federal Requirements

### 1. Control Over Surface Disturbance and Reclamation

Almost all the mining States have adopted legislation regulating surface disturbance associated with mining activities, both by prohibiting such surface disturbance in certain areas and by closely controlling its impact in areas where it is allowed. In addition, some States have enacted statutes requiring State approval of the siting of mining activities or associated energy conversion and transmission facilities. These statutes coexist with, and sometimes are explicitly tied to, State and local land use plans and zoning requirements. Except where specific exceptions are made in these statutes, they are generally considered by the States to be applicable to both Federal and non-Federal lands.[75]

The most common form of State legislation is a mined-land reclamation statute. Some States (for example, New Mexico) currently impose reclamation requirements on only a few minerals, primarily coal. Others (for example, Idaho, North Dakota, Montana,[76] and Wyoming) include all minerals. Some statutes cover surface mining only, while others cover both underground and surface mining. All these statutes prohibit mining operations in the absence of an approved reclamation plan and a permit. Substantial bonds are required to ensure completion of the reclamation. Some of the States require permits for prospecting or even preparatory activities prior to prospecting or mining.

Most State reclamation statutes specify certain areas where mining will not be allowed, including, for example, areas that cannot be reclaimed as required; areas where mining would constitute a public nuisance or endanger the public health and

[73] See L. Tribe, *American Constitutional Law* 460-461 n. 3 (1978); *Pittsburgh* v. *Alco Parking Corp.*, 417 U.S. 369 (1974).

[74] See the debates cited in note 66.

[75] See generally Federation of Rocky Mountain States, note 34, tables 10 and 11, at 36-39.

[76] Article IX, § 2, of the Montana Constitution requires that all lands disturbed by the taking of natural resources be reclaimed. This constitutional mandate is implemented through a series of acts codified in title 50 of the Revised Code of Montana. Ch. 10 covers coal and uranium, whether mined by surface or underground methods; ch. 12 covers hardrock minerals; and ch. 15 covers bentonite, clay, scoria, phosphate, sand, and gravel.

safety; areas adjacent to occupied dwellings, buildings, public roads, parks, streams, lakes, or other public property; and areas of exceptional, critical, or unique biological, ecological, scenic, historical, archaeological, or cultural significance.

A few State statutes provide that certain lands containing federally owned minerals may be exempted from the State reclamation requirements, but only if such lands are governed by Federal laws or regulations at least as stringent as the State requiremerits. [78]

However, many State reclamation statutes contain weak substantive requirements, due in large part to a fear that stronger requirements would drive mineral operators away to more lenient States, Moreover, enforcement efforts in almost all States have been weak because of inadequate staffing and funding. ' Attempts to develop strong State programs have also been hindered by uncertainty over the development of Federal reclamation requirements, which did not exist until recently and are themselves vague and weak for minerals other than coal.[80]

Congress addressed these problems, for coal mining only, in the Surface Mining Control and Reclamation Act of 1977, which establishes tough Federal reclamation requirements for coal mining operations,"' allows States to apply their own requirements to operations on Federal land if the State requirements are at least as stringent as the Federal requirements,[82] provides for State administration of the Federal requirements themselves on Federal land through cooperative agreements with the Secretary of the Interior (except for the Secretary's responsibility for issuing leases, approving mining plans, and designating areas as unsuitable for mining),[83] and provides Federal technical assistance, training, and funds for the development, administration, and enforcement of the State programs, including full funding of any State program under a cooperative agreement for administration of the Federal requirements on Federal land.[84]

Many of the State reclamation statutes attempt to protect surface owners who do not also own the underlying minerals by requiring consent of the surface owner to mining operations that cause surface disturbance, as well as payment of certain specified damages should mining be allowed, Some statutes, such as Wyoming's, provide for issuance of a permit despite a refusal of consent if the mining operations would not "substantially prohibit the operations of the surface owners" and if the required reclamation can be accomplished. North Dakota's Surface Owner Protection Act allows the mining applicant to sue for a determination of rights if consent is refused. The situation in Montana is not clear. The Montana Strip and Underground Mine Reclamation Act generally requires the consent of the surface owner, but exempts federally owned minerals from the consent requirement. However, the Montana Land Owner Notification Act requires notice to and consent by the surface owner of private land, without any such explicit exemption for Federal minerals. It does exempt discovery pits required to locate a mining claim on Federal land if excavated by hand with hand tools,

[78] See Mont. Rev. Code 50-1042 (Supp. 1978); Wyo. Stat. Ann. 35-502.24(g) (Supp. 1978).

[79] For example, the Montana statutes covering bentonite, clay, scoria, phosphate, sand, gravel, and hardrock minerals.

[80] Thompson and Lindahl, Congressional Research Service, Library of Congress, *State Surface Mining Laws: A Survey, A Comparison With the Proposed Federal Legislation, and Background Information*, Pub. No. 95-25, Senate Comm. on Energy & Nat. Res., 95th Cong., 1st sess. (Comm. Print 1977); U.S. General Accounting Office, Letter B-118678, May 17, 1977.

[81] See ch. 5, subsecs. D(2)(b) and E(3).

[82] 30 U.S.C. §§ 1251-1279 (Supp. I 1977).

[83] Ibid., § 1255.

[84] Ibid., § 1273.

[85] Ibid., § 1295.

and it does not apply where the prospecting or mining operation is "in accordance with the terms of a prospecting permit or lease covering any mineral interest in said land. "

As was discussed in the preceding section, State surface owner consent provisions that purport to apply to federally reserved minerals conflict directly with the Federal laws defining the respective rights of the surface owner and the mineral explorer-developer. Such provisions are, therefore, invalid as applied to federally reserved minerals. More generally, State surface owner consent provisions are subject to serious challenge as unconstitutional impairments of contract obligations and takings of property without just compensation, The Kentucky Court of Appeals recently struck down the surface owner consent provisions of the Kentucky strip-mining statute on precisely these grounds. It noted that, while the State's exercise of its police power might justify a complete prohibition of strip mining in all or certain designated areas, surface owner consent provisions permit private individuals (the surface owners) to frustrate whatever environmental conservation purpose the legislation may have by granting their consent, and therefore the primary purpose of such provisions is "to change the relative legal rights and economic bargaining positions of many private parties under their contracts rather than [to] achieve any public purpose. " The court specifically noted that the consent provision did not involve the construction and validity of the underlying contracts and deeds.[85]

However, the Federal Government, as owner of the federally reserved mineral deposits, may require surface owner consent as a condition to allowing some third party to acquire development rights for the federally reserved minerals. It very recently has imposed a surface owner consent requirement for issuance of leases for federally reserved coal deposits when such deposits are to be mined by other than underground mining techniques.[86] In addition, surface coal mining operations cannot be begun, even when the Federal Government owns the surface as well as the subsurface, if the surface is subject to a nonmineral (e.g., grazing) lease or permit, unless the surface lessee or permittee has given his written consent or the coal miner has executed a bond to secure payment for any damages to the crops or tangible improvements of the surface lessee or permitted."' A similar requirement applies to development of any Federal mineral underlying nonfederally owned surface. [88]

It should be noted that a requirement of surface owner consent (rather than simple payment for damages to surface values) allows the surface owner rather than the Federal Government to appropriate the value of the Federal minerals as well as the value of the non federally owned surface,

## 2. Control Over the Use of Water

Control over the use of water, including water used by private parties on Federal land, has always been a jealously guarded State prerogative, especially in the arid

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[85] *Department for Natural Resources and Environmental Protection* v. *No. 8 Limited of Virginia*. 528 S.W.2d 684 (Ky. 1975).

[86] Surface Mining Control and Reclamation Act of 1977, § 714, 30 U.S.C. §1304 (Supp. I 1977).

[87] Ibid., § 715, 30 U.S.C. § 1305 (Supp. I 1977).

[88] See note 71.

Western States.[89] The Federal Government generally has acquiesced in each State's control over the water within its boundaries, although water rights are implicitly reserved by the Federal Government in connection with reservations or withdrawals of Federal land for a particular public purpose.") Thus, the Federal Surface Mining Control and Reclamation Act of 1977 states: "Nothing in this Act shall be construed as affecting in any way the right of any person to enforce or protect, under applicable law, his interest in water resources affected by a surface coal mining operation,'"

The State reclamation statutes require a comprehensive assessment of the water-related impacts of mining and reclamation. It can be anticipated that permits to mine will be refused when the responsible State agency determines that insufficient water would be available for reclamation or that significant damage to an aquifer would occur, Both the Montana and Wyoming reclamation statutes authorize suits by property owners against mining operators for damages due to pollution, diminishment, or interruption of water supply. The Federal Surface Mining Control and Reclamation Act reinforces the State laws with respect to surface coal mines by requiring the operator of any such mine to "replace the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where such supply has been affected by contamination, diminution, or interruption proximately resulting from such surface coal mine operation. [92]

In at least one respect, however, Federal and State interests in the use of water may conflict, Both Montana and Wyoming prohibit the use of water for slurry pipelines to export coal out of the State. The Wyoming legislature has made one exception, subject to certain restrictions and a right of termination, for the use of 20,000 acre-feet of water per year for a coal slurry pipeline to Arkansas. [93] Such explicit restrictions on the interstate use of water (there is no ban on use of water for any coal slurry pipeline within the State) would seem to be invalid as an unconstitutional discrimination against interstate commerce. [94]

### 3. Control Over the Location and Timing of Construction of Mineral-Related Facilities and Infrastructure

State and local governments can exercise substantial control over the location of mineral-related facilities and infrastructure through land use plans, zoning, permit, and other requirements related to land use and development.

Such requirements can significantly affect mineral activity on Federal land even when they are not applied directly to it, because much if not most of the infrastructure required to support mineral activity on Federal land—roads, powerlines, sites for ma-

[89] U.S. Water Resources Council, *Water for Energy: Self Sufficiency*, ch. 3 (October 1974). See generally Hutchins, Ellis, and De Braal, *Water Rights Laws in the Nineteen Western States*, U.S. Department of Agriculture Misc. Pub. No. 1206 (3 volumes: 1971, 1974, 1977).

[90] E.g., *Cappaert* v. *United States*, 426 U.S. 128 (1976).

[91] 30 U.S.C. § 1307 (Supp. I 1977); see 30 U.S.C. § 1021 (1976) (geothermal steam). More generally applicable is 30 U.S.C. § 51 (1976).

[92] 30 U.S.C. § 1307 (Supp. I 1977).

[93] Mont. Rev. Code 89-867(2) (Supp. 1977); Wyo. Stat. Ann. 41-10.5 (Supp. 1975).

[94] See L. Tribe, *American Constitutional Law*, ch. 6 (1978); cf. ibid. at 404-412.

jor conversion or generation facilities, housing, etc.—will be on non-Federal land. Moreover, mining claims patented under the Mining Law are no longer Federal land.

But State and local control over land use apparently is not limited to non-Federal land. According to the principles discussed in section C, the States' police (regulatory) power may be exercised with respect to private activities (but not those of the Federal agencies themselves) on Federal land, and it thus should extend to activities of mining claimants and mineral lessees on Federal land unless Congress has preempted its application, which Congress does not seem to have done. The Federal mining and mineral leasing laws do not preempt, but rather explicitly preserve, the application of the States' police power. And the recently enacted Federal Land Policy and Management Act of 1976 (BLM Organic Act) contains several provisions that affirm the applicability of the States' police power to private activities on Federal land. For example, the right-of-way provisions require each right-of-way across Federal land to contain conditions that will "require compliance with State standards for public health and safety, environmental protection, and siting, construction, operation, and maintenance of or for rights-of-way for similar purposes if those standards are more stringent than applicable Federal standards. [95] The sales provisions require that, prior to conveyance of any land administered by BLM, notification be given to any State or local agency "having zoning or other land use regulatory jurisdiction in the geographical area within which such lands are located, in order to afford the appropriate body the opportunity to zone or otherwise regulate, or change or amend existing zoning or other regulations concerning the use of such lands prior to such conveyance. "[96] The land use planning provisions require that,

> [T]o the extent consistent with the laws governing the administration of [BLM] lands, [the BLM shall] coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs of the States and local governments within which the lands are located . . . . In implementing this directive, the [BLM] ., . shall provide for meaningful public involvement of State and local government officials . . . in the development of land use programs, land use regulations, and land use decisions for [BLM] lands, including early public notice of proposed decisions which may have a significant impact on non-Federal lands. . . . Land use plans of the [BLM] under this section shall be consistent with State and local plans to the maximum extent [the Secretary of the Interior] finds consistent with Federal law and the purposes of this Act. [97]

State and local land use and zoning requirements that effectively prevented the exercise of mineral rights acquired under the Federal mining and mineral leasing laws might be held to constitute a "taking" that would require payment of just compensation under the Federal Constitution, although decisions of the U.S. Supreme Court in the past have not required compensation in cases where mines were closed down as public nuisances.[98] Moreover, overly aggressive State and local regulation of private activities on Federal land that effectively stymied Federal land use planning and management would not be valid.

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[95] 43 U.S.C. § 1765(a) (1976).
[96] Ibid., § 1720 (emphasis not in original).
[97] Ibid., § 1712(c)(9); cf. ibid., § 1712(f).

[98] *Goldblatt* v. *Town of Hempstead*, 369 U.S. 590 (1962); *Hadachek v. Sebastian*, 239 U.S. 394 (1915); see L. Tribe, *American Constitutional Law* 457-465 (1978).

Generally, however, these sorts of problems have not arisen and are not likely to arise under current practices. Traditional land use planning and zoning are not common in the rural regions of the West where actual and projected mining activity is concentrated," Where local zoning does exist, it is rarely extended to Federal land, but rather is used to control infrastructure development on associated non-Federal land. And, in some instances, the zoning power is limited with respect to mineral-related activities. For example, the Wyoming statute authorizing counties to zone and adopt land use plans with respect to unincorporated areas provides that "no zoning resolution or plan shall prevent any use or occupancy reasonably necessary to the extraction or production of the mineral resources . . ,[100] However, the Wyoming Conservation and Land Use Study Commission has recommended that this restriction be repealed. [101]

Major mineral development activity affects areas or regions encompassing many different communities and counties. Local land use planning and zoning by each affected community and county may result in conflicts and failure to adopt a comprehensive land use policy. '02 It can also result in a plethora of uncoordinated permit requirements that unnecessarily delay desirable development. '()' A few States have recently enacted comprehensive siting legislation to assure sufficient advance planning and coordination of permitting procedures for major energy facilities, including transmission facilities and routes. The laws require that a permit be obtained for any covered facility; require 5 to 10 years advance notice of all new construction, or commencement or termination of operation, of a covered facility; require submission of substantial detailed information concerning any planned facility; provide for extensive studies of socioeconomic and environmental impact (the cost of the studies is borne by the applicant); and require public hearings after notification of all affected State agencies, communities, and local citizens prior to issuance of a permit. Permits will be granted only if the environmental and socioeconomic impacts are acceptable and if the proposed facility will be compatible with (a) the public health and safety, (b) State and local land use plans and zoning requirements, unless the local requirements are unreasonably restrictive, and (c) Federal and State environmental standards. The laws provide for a "one-stop" siting and route approval agency. No further State or local approvals need be obtained once the permit has been issued.[104]

The States' emphasis on better planning, evaluation, and coordinated use of transportation and transmission corridors is complemented by the right-of-way provisions in the BLM Organic Act, which, as noted above, require rights-of-way across Federal land to comply with State siting, construction, operation, and maintenance standards that are more stringent than the Federal standards.[105] In addition, the Federal provisions require utilization of rights-of-way in common, to the extent practical, in order to minimize adverse environmental impacts and the proliferation of separate rights-of-way. [106] The Secretary of the Interior may require the user of any right-of-way, land, or other facility on BLM land to maintain or contribute his proportionate share

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[99]See Federation of Rocky Mountain States, note 34, at 38-39.

[100]Wyo. Stat. Ann. 18-289.1 (Supp. 1975).

[101]Wyoming Conservation and Land Use Study Commission, 1 *Statewide Land Use Planning Program for Wyoming* (October 1974).

[102]See, e.g., *Economic Impact of the Oil Shale Industry in Western Colorado*, note 45, at 12, 17.

[103]Cf. Bosselman, Feurer, and Siemon, *The Permit Explosion: Coordination of the Proliferation* (1976).

[104]Nehring and Zycher, note 34, at 89-93, 106-115, 135

[105]43 U.S.C. § 1765 (1976).

[106]Ibid., § 1763.

for the maintenance of such facility and to reconstruct such facility when such reconstruction is determined to be necessary to accommodate his use. [107]

## E. State and Local Mineral Taxation and Revenue Distribution: Coordination With Federal Payment Requirements and Revenue Distribution

### 1. State and Local Mineral Taxes: Types and Effects

At least five different types of taxes are imposed by State or local governments on mineral activities: property taxes, income taxes, sales taxes, franchise or license taxes, and severance taxes. All of these different types of taxes are imposed concurrently in some States, while others rely on only one or a few of the types. The total tax burden on the mineral industry in any one State depends on the number of different taxes imposed, the basis of each tax [for example, net versus gross value), and the level (rate) of each tax.

Owners of mineral property (or interests in mineral property such as mineral leases or mining claims), like owners of nonmineral property, are subject in each State to an ad valorerm property tax on the value of the mineral property. Valuation of mineral property, however, is more difficult than valuation of most nonmineral property, at least insofar as the value of the mineral deposit itself is concerned rather than the value of mine equipment and facilities, In some States, the value of the mineral deposit itself (that is, the ore body in the ground) is estimated by calculating the present value of all future projected net earnings from the mining operation. However, this valuation method is difficult and speculative, so most States instead use the (net or gross) value of annual production, or in some instances a capitalization of annual net income, as a proxy for the fair market value of the mineral property.[108] Once the value of the mineral property is determined by either method, it is multiplied by a certain percentage to obtain the “assessed value” of the property. Often, the mine equipment and facilities are assessed separately from the ore body itself, using traditional fair-market-value valuation methods. Finally, the actual property tax is calculated by applying the tax rate, usually called a mill levy, to the assessed value. The mill levy is the same for mineral and nonmineral property, but it will usually vary from one part of a State to another, because it is set by each local government based on local revenue needs.

Most States also have corporate and personal income taxes on net income received from activities in the State, The mining industry is subject to income taxes the same as any other industry, except the mining industry is often taxed at a much lower effective rate as a result of mineral depletion allowances and other special tax subsidies.

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[107] Ibid., § 1762(c).

[108] Laing, “Effects of State Taxation on Mining Industry in Rocky Mountain States,” 72 *Q. Colo. Sch. of Mines*, No. 2, at 61-68 (April 1977); Ballard, “Comparison of Metal-Mining Taxation in 13 Selected Western States,” 176 *Eng. & Mining J.*, June 1975, at 32, 37.

Many States impose sales taxes on the net or gross value of sales of certain goods or products in the State. A sales tax is usually applied only at the retail level, and is applied uniformly to all covered goods and products, including mineral products. Some sales taxes exclude mineral fuels used for industrial purposes,

Some States impose franchise or license taxes for the privilege of doing business in the State. The tax may be imposed on only certain types of businesses, and the basis for and rate of the tax will often vary depending on the type of business. Several States have imposed franchise or license taxes as a substitute for income taxes and have applied such taxes to all business activity in the State. A few States have imposed a special license tax on net or gross income from the production of certain minerals in addition to generally applicable franchise or income taxes. Such a special license tax is in effect a severance tax (see below).

The principal type of tax applied specifically to mineral activity as a distinct form of economic activity is the severance tax, which is imposed on the activity of severing natural resources from the land in the State (a severance tax is often imposed on timber as well as mineral production). Mineral severance taxes are almost always imposed in addition to the other State and local taxes, described above, that are generally applied to all industries within the State, Severance taxes may be imposed on all or only some minerals and are usually set at different rates for different minerals. The tax may be specified as a flat fee per unit of production, with or without adjustment for inflation, or as a percentage of the net or gross value or proceeds of production.

The reclamation fee or tax imposed by State reclamation laws to cover the expenses of State reclamation programs is often a form of severance tax, as are *'natural resource excise" taxes and similar taxes on mineral production per se.

A severance tax, or any tax based on the quantity or value of production, is in effect a royalty, because it is a charge levied on each unit of production. If it is based on the gross rather than the net quantity or value of production (net value is gross value—i.e., sale price—less costs of extraction and processing), it can prevent mining of low-profit mineral deposits that otherwise could supply needed minerals. In addition, as was discussed in chapter 4,[109] it can result in reduced mineral production if mineral production is actually started. Almost all mineral tracts contain deposits of varying thickness and quality. A tax based on gross quantity or value of production, no matter how small the tax is, may make it unprofitable to extract some portion of the lower grade ore in the depositor to extract ore from a lower grade deposit in the tract, which otherwise could have been profitably extracted. Thus, the tax encourages "high-grading" of mineral deposits while production is underway, discourages investment in techniques for boosting production through tapping of the lower grade portions of the deposits (e.g., secondary and tertiary recovery techniques for oil and gas deposits], and forces premature termination of production when all the higher grade ore has been extracted. Mineral resources that could have been extracted are left in the ground and will probably never be extracted given the high costs of restarting production once it has been terminated. The result is not only a loss of producible minerai resources, but also more damage to nonmineral resources than would otherwise be in-

[109]Ch. 4, subsecs. E(2) and F(3).

curred, since more deposits will have to be mined to obtain the desired quantity of mineral production. Even when the same mine is reopened, the surface will be disturbed twice rather than only once.

Nevertheless, State taxes (or Federal royalties) based on the gross quantity or value of mineral production would be efficient if they served as a charge for the net environmental, socioeconomic, and other costs imposed on persons other than the mineral producer by each additional unit of production. If that were the case, the mineral producer would simply be forced to weigh all mineral and nonmineral benefits and costs in deciding whether to produce the additional unit. If the total costs outweighed the benefits, the production of one more unit would be wasteful.[110]

But production payments, whether based on the net or gross value of mineral production, do not serve as such a charge for costs imposed on others, since the amount of damage is not directly related to the quantity or value of production. For example, most of the environmental and socioeconomic damage occurs in the exploration and development stages of mineral activity before production has even begun-indeed, production may never begin, even though exploration or development, or both, have been completed. Once the mine has been opened and production has begun, little or no additional environmental and socioeconomic damage may result from each unit of production. For example, digging farther in an existing tunnel or pit to produce lower grade ore may result in little if any additional surface disturbance. In fact, as was discussed above, it may prevent additional surface disturbance caused by a later reopening of the mine or the opening of another mine.

Sometimes it is thought that gross-value taxes provide more certain and predictable tax revenues when economic conditions, and hence profitability, decline. But a gross-value tax may lead to less stable rather than more stable revenues under such conditions, since it can make mining unprofitable and thus cause termination of production and a total loss of tax revenue, whereas a net-value tax would continue to bring in revenue, even though the revenue might be reduced. Moreover, stability of revenue is most critical at the local level, which relies heavily on property taxes. A large portion of the property tax base associated with mineral and energy development is made up of equipment and facilities and other fixed capital items that can be assessed using traditional fair market value methods, rather than an annual proceeds method, and that therefore can provide a substantial revenue base independent of production. This is the case, for example, with the major energy generation and conversion facilities that are viewed as posing some of the more substantial socioeconomic problems, Mines themselves are also very capital intensive.'" Thus, it has been suggested that the most reasonable tax on a mine, from the standpoint of mineral production, resource conservation, and stable tax revenue, may be a property tax based on "the assessment of the mine plant on the same basis used for any other industrial plant and the assessment of the ore body based on the 'net proceeds' calculation. [112] Any fluctuation in the net proceeds portion of the property tax (or any alternative type of tax on net value) "could be overcome by an averaging [over several years] method, or

[110] See ch. 4, subsec. E(1).
[111] Federation of Rocky Mountain States, note 34, at 65.
[112] Laing, note 108, at 99.

even a minimum requirement based on payments in previous years. But in all fairness, some allowance for payments in periods of nonproduction should carry over to productive years in the form of tax credits.''[113]

Tax liability based on the gross value of production can result, as was discussed above, in substantial waste of mineral and nonmineral resources. However, many States impose mineral taxes based on the gross amount or value of production of some or all minerals,'" For example, Montana has imposed a 30-percent tax on the gross value of surface-mined coal other than low-grade lignite, an additional "resource indemnity trust" (severance) tax of one-half of 1 percent on the gross value of all mineral production including coal, and a property tax based on an assessed valuation of 45 percent of annual gross proceeds of surface coal mines. [115] When these taxes are added to the minimum 12.5-percent Federal royalty and the 10-percent (or 35 cents per ton, whichever is less) Federal reclamation fee on the gross value of surface-mined Federal coal[116] (half of the Federal royalty and fee are paid directly to the State of Montana[117]), plus overriding royalties reserved by assignors of Federal coal leases that can be equal to half or more of the Federal royalty,'" it is apparent that mining of Federal coal in Montana could be extremely wasteful in terms of maximum economic recovery of mineral resources and conservation of mineral and nonmineral resources, despite Federal and State requirements and declarations of concern related to maximum recovery and resource conservation. [119]

The mineral industry is usually the only industry subjected to gross-value taxes (other than the retail sales tax). Property taxes for nonmineral business properties are based in theory on fair market value—that is, what a buyer would be willing to pay for it. A buyer will be willing to pay only the present value of projected future net earnings from the property. General franchise or license taxes are either a flat fee or a percentage of net proceeds from the business. Moreover, the mineral industry is usually the only industry other than the timber industry subjected to special production taxes such as the severance tax.

Several reasons have been offered for the heavier tax burden placed on the mineral industry under most State tax systems (but note that the burden is usually lighter for one tax—the income tax—as a result of mineral depletion allowances and special expense provisions). First, it is reasoned that mineral resources, or at least the higher grade mineral resources, have an inherent value above the value added by the effort spent in finding, developing, and producing them—a "natural bounty" that can be taxed away and used for the benefit of the public as a whole without affecting mineral production or overall efficiency. However, State efforts to capture the natural bounty, if any exists, for Federal minerals can be objected to on the grounds that (a) the bounty belongs to the Federal Government, as owner of the resource and also as representative of all citizens in the Nation, rather than to any particular State and its citizens and

[113] Ibid., at 100.

[114] See Laing, note 108, at 39-70; Ballard, note 108; Yasnowsky and Graham, "State Severance Taxes on Mineral Production," *Proc. 105th AIME Ann. Meeting, 1976*, at 45-58, reproduced as U.S. Bureau of Mines paper OP 63-76; Colorado Legislative Council, *Report to the Colorado General Assembly: Recommendations for 1976 Committee on Mineral Taxation*, Res. Pub. No. 214 (November 1975).

[115] Laing, note 108, at 46-52.

[116] 30 U.S.C. § 207(a) (1976); ibid., § 1232 (Supp. I 1977).

[117] See subsec. 3.

[118] See ch. 4, subsec. F(3).

[119] See ch. 4, subsec. F[4]; Federation of Rocky Mountain States, note 34; Strip Mined Coal Conservation Act of 1973, Mont. Rev. Code 50-1401 to 1409 (Supp. 1977).

(b] the U.S. Congress has explicitly declared that the Federal Government shall collect this bounty for leasable minerals by requiring fair market value to be paid for such minerals. Moreover, as was discussed in detail in section E of chapter 4, payment requirements designed to capture this natural bounty should be based on net rather than gross value of production.

A variation on the natural bounty rationale is the conversion of this bounty into a "natural heritage" belonging to the State, which is irretrievably lost when the mineral is removed from the earth and sold for private profit, thus justifying a State tax to compensate the State (or, more precisely, its citizens) for at least a portion of its lost wealth. [120] The natural heritage rationale suffers from the same flaws as the natural bounty rationale on which it is implicitly based: the "heritage" belongs to the Federal Government rather than to the State insofar as Federal land is involved, and the "lost wealth" can be no more than the net value of production. A tax based on gross value captures the wealth added by the efforts of mineral operators in addition to the value of the mineral deposit in the ground prior to identification, development, and production. Moreover, the natural heritage rationale is a rather circular one: the mineral deposit does not have any monetary value to the State or its economy until it is found and produced, so that discovery and production of the mineral deposit produces or "frees" value rather than resulting in any loss of value to the State, The mineral will have no value to the State if it is never produced, Finally, the gross-value tax itself results in a loss in mineral wealth or ''natural heritage" because it prevents some low-grade deposits from being mined and causes high-grading of other deposits.

Similarly, a tax imposed to create a "trust fund" to tide the State over when all its minerals have been removed is a forced subsidization by present consumers across the Nation of a continued higher level of spending by the State that is no longer needed to pay for the impacts of mineral development (see the next paragraph) and would never have been possible in the first place if there had been no mineral activity, If the State wants to maintain a high level of economic activity in its "postmineral era" rather than returning to its prior rural base (augmented by the capital improvements constructed during the mineral era), it might be healthier and more productive for the State, and the Nation as a whole, if that economic activity were maintained through development of new profitmaking industry rather than through income from a trust fund. Moreover, the basic premise for the establishment of a trust fund—the exhaustion of the State's mineral resources—is itself flawed in at least some cases: Montana officials, for example, estimate that the State has enough recoverable coal "to last us a thousand years with some left over.[121]

A fourth rationale advanced for a heavier tax burden on the mineral industry is the burden placed on State—and especially local—governments in rural areas by mineral activity, particularly activity that produces the boom-bust phenomenon. However, the capital-intensive facilities and related economic activity associated with mineral and energy production will almost always produce sufficient additional tax revenue through normal property taxes, sales taxes, and income taxes to pay for the additional public facilities and services required as a result of the mineral activity. The problem

[120] See, e.g., Colo. Rev. Stat. 39-29-101 (Supp. 1977).
[121] Richards, "Boom in Strip Mining: Windfall for Montana," Washington Post, May 22, 1977, at A1, A4.

is not insufficient revenue, but rather ensuring that the revenue gets to the affected jurisdiction in a timely manner, so that needed public facilities and services are in place before the boom hits and are paid for before the bust, if there is a bust.[122] The problems of revenue distribution and timing are discussed in subsection 2, where it is also pointed out that the amount of mineral revenue being collected by some States is greatly in excess of the amount required to cover the socioeconomic impacts of mineral activity. For example, ones studv, using generous estimates of The State and local investments and expenditures required to cope with the socioeconomic impacts of a surface coal mine producing 10 million tons per year in Montana, calculated that a 11 the necessary public investment and expenditures could be covered by using only 62.5 percenl of the first year's severance tax to cover the necessary capital investment and 12.5 percent of the first and each succeeding year's severance tax to cover annual expenditures on services. [123] The rest of the severance tax, plus all the State and local property. income, sales, and resource indemnity trust taxes at attributable to the mineral activity, plus all the mineral leasing revenue received from the Federal Government (see subsection 3), would be surplus revenue.

When this abundance of revenue is acquired by the State at the expense of consumers throughout the Nation, and when it is collected through gross-value taxes that may prevent mining of much Federal coal and result in high-grading of other coal, serious questions may be raised as to whether Montana's mineral taxation system, and others like it, impose an intolerable burden on interstate commerce or on the Federal Government's management and disposal of its property. Congress might want to remedy such a burden, even if it is not so severe as to be unconstitutional given the leeway afforded the States by the Mineral Leasing Act. [124]

The net effect of Federal, State, and local mineral royalties, fees, and taxes on efficient mineral production and total resource conservation should be carefully investigated as part of a more rational, coordinated approach to Federal mineral land management and, more generally, national fuel and non fuel mineral policy.

### 2. Magnitude and Disposition of State Revenues Derived From State and Local Mineral Taxes

As was discussed in subsection 1 above, the principal State and local taxes imposed on mineral-related activities are the property, sales, income, license, and severance taxes.

The main sources of tax revenue at the local level are the property and sales taxes. The property tax is almost always assessed and collected at the local level, although the purposes for which the tax may be assessed and the permissible rates of assessment are usually specified by the State legislature, and in some States a State property tax is levied in addition to the local property taxes. The sales tax may be imposed at the local level separately from or in addition to any State sales tax, again as

[122] Federation of Rocky Mountain States, note 34, at 63-70, 74-76, 132. See the detailed discussion in subsec. 2.

[123] Nehring and Zycher, note 34, at 148-149; see also Richards, note 121.

[124] See sec. C.

allowed by the State legislature. If there is only a State sales tax, local governments are sometimes given a fixed percentage of the State sales tax revenues derived from sales in their jurisdictions. Local governments also receive substantial revenue from utility and license fees and charges.

The main sources of tax revenue at the State level are sales, income, license, and severance taxes. Several of the States return a portion of some or all of these taxes to the locality from which they were collected. The sales tax is the most common example: Colorado, for instance, returns three-fourths, while Wyoming has recently increased the portion it returns from one-sixth to one-third. Montana returns a small portion (1.5 percent until 1980, none thereafter) of its coal severance tax to the county in which the coal was produced and allocates one-fourth of the State income tax to support schools in the State. Utah allocates a portion of the State taxes on income, corporations, property, cigarettes, and liquor to each school district. Generally, each State provides substantial assistance to school districts throughout the State. 'z'

Several studies have shown that even those localities most adversely affected by mineral and energy development activity can receive sufficient revenue through State and local taxes to cope with the socioeconomic impacts of that activity.'" Mineral and energy development activity are capital-intensive and generate substantial economic activity in any area in which they are undertaken. In fact, the additional revenue generated as a result of the expansion of the tax base by mineral-related facilities and activity has enabled or will enable most localities to reduce their property tax rates and thus lower the tax burden on permanent residents.

Generally, the problem is not insufficient State and local revenue, but rather ensuring that the revenue gets to the unit of government that needs it in a timely manner. Mineral-related construction and development usually occur in the rural areas of a county outside the cities and towns. The counties and school districts benefit from the expansion of the property tax base, while the cities bear the increased burden on public facilities and services (other than schools and county roads) due to the increased population. Thus, each of the counties and school districts analyzed in the impact studies mentioned above, except the Farmington, N. Mex., school district, had or was projected to have either budget surpluses or reduced property tax rates as a result of increased property tax revenues flowing from mineral-related development. The Farmington school district and the cities and towns studied did not derive similar benefits, since the mineral development lay outside their respective boundaries.

The cities and towns generally rely on sales taxes, utility and license fees and charges, and varying amounts of Federal revenue-sharing and other grants as sources of revenue at least as important as the property tax. Several of the cities and towns

[12] See the studies cited in note 126.

[13] Federation of Rocky Mountain States, note 34, at 63-70; Hickok and Samuelson, Office of Minerals Policy Development, U.S. Department of the Interior, *Economic Impact of Projected Energy Development: Craig and Moffat County, Colorado* (December 1975); Real Estate Research Corporation, *Excess Cost Burden, Problems and Future Development in Three Energy Impacted Communities of the West* (September 1975); Resource Management Systems, *A Description of Potential Socioeconomic Impacts From Energy-Related Developments on Campbell County, Wyoming* (September 1975); Johnson and White, *Colstrip, Montana: The Fiscal Effects of Recent Coal Development and an Evaluation of the Community's Ability to Handle Futher Expansion* (October 1975). All of these studies except the Federation of Rocky Mountain States study were prepared for the Office of Minerals Policy Development of the U.S. Department of the Interior. A recent analysis which generally reaches conclusions similar to those in the case studies done for the Department of the Interior is J. Krutilla, A. Fisher, and R. Rice, *Economic and Fiscal Impacts of Coal Development: Northern Great Plains* (1978).

studied—e.g., Rock Springs, Wyo., and Vernal, Utah—were able to reduce their property tax rate because of increased revenue from sales taxes or other sources resulting from mineral-related activity, Only Gillette, Wyo., faced a serious long-term problem of insufficient local revenue to meet the socioeconomic burden of mineral development. Vernal was relying heavily on Federal grants and assistance rather than local property, sales, or other taxes or fees. In fact, as was noted above, Vernal was reducing its property tax rate. In general, however, the cities and towns, when compared with the counties and school districts, were finding it more difficult to cope with the socioeconomic impacts of mineral development, since they faced the brunt of the population influx but, except through sales taxes, did not share in much of the additional revenue generated by that development.

The potential scope of the problem created by separation of the tax base and the affected unit of government is suggested by projections in one study that cities and towns would need some $600 per year to service each new resident, but that based on revenue sources available to such municipalities they could expect to realize tax revenues attributable to each new resident of only $210 to $450 per year. The study noted that State and local taxes on the mineral developments themselves would provide more than enough funds to make up the deficit, but those funds usually are not available to the municipality.[127]

The distribution problem is not a problem for municipalities only. As was mentioned above, the mineral developments near Farmington, N. Mex,, are situated outside the Farmington school district, which services much of the increased population resulting from those developments. Similarly, the impact study for Colstrip, Mont., noted that many of the construction workers on the mineral projects in the Colstrip school districts lived outside those school districts and even outside the county. Another study of six counties in Montana, North Dakota, and Wyoming expected to be heavily impacted by mineral and energy development projected that in four of the six counties incremental revenues, due to such development, received in 1985 (compared to revenues received in 1974) would be 2 to 6 times greater than incremental budget costs, while in the other two counties incremental budget costs would be 1 to 38 times greater than incremental revenues. The county with the worst budget-revenue imbalance, Sheridan County in Wyoming, could also have the most difficulty in correcting the imbalance, because it results from development in another State rather than just another county in the same State:

> Presumably, many coal miners and plant personnel will select Sheridan (city) as their place of residence while working in the coal fields just across the State line in Big Horn County, Montana. The city and county of Sheridan will be called on to provide the needed social services generated by the employees who work in Montana. Yet Sheridan will not receive any tax benefits from the exploitation of Montana Coal.""

Except for interstate impact problems similar to those faced by Sheridan city and county, it is clear that State and local revenues generated by mineral development ac-

[127] Federation of Rocky Mountain States, note 34, at 65.

[128] Northern Great Plains Resources Program, *Socio-Economic and Cultural Aspects Work Group Report* 124-127 (June 1974). Another study affirms the projected *inter*state distribution problem for Sheridan but also projects an *intra*state problem due to development in neighboring Johnson County in Wyoming. Nehring and Zycher, note 34, at 122.

tivity are usually sufficient in the aggregate to cope with the socioeconomic impact of that mineral development activity, This would probably be the case even if only State and local property, sales, and income taxes were considered. [129] It is surely the case when recently enacted or increased severance taxes are also considered. For example, Montana received about $34 million in 1977 from its severance tax on coal. [130] Projected increases in coal prices and coal production are expected to result in hundreds of millions of dollars of severance tax revenue per year for Montana and other Western States. [131] None of the States that have, like Montana, Colorado. and North Dakota, recently instituted or increased mineral severance taxes have felt it necessary to use more than a small portion of the incremental revenues generated to pay for the socioeconomic impact of the mineral activities being taxed (see below). The problem is the distribution of State and local revenues rather than the sufficiency of those revenues.

Another problem is the timing of receipt of revenue. Public facilities and services must be provided for the population influx associated with mineral development activity, prior to the time revenues are generated by addition of property improvements to the tax rolls or by taxation of production. Moreover, high front-end public expenditures for capital improvements will be required, which may exceed any one year's revenues.

The traditional response to both of these timing problems has been to obtain the front-end money through loans or bonds secured by future tax revenues. But State laws often limit the ability of local units of government to incur such indebtedness. For example, Wyoming limits local city indebtedness to 2 percent of the assessed valuation of property in the city, which is unusually restrictive when compared to 4- to 6-percent limitations elsewhere.[132] Residents of some cities and counties are extremely reluctant to incur any public debt. Most of the cities, school districts, and counties analyzed in the impact studies mentioned above that experienced or will experience front-end financing problems have been unwilling to alleviate those problems through the traditional bonding mechanism.

In certain instances, local units of government may find it difficult to obtain loans or issue bonds at favorable rates because of their limited capital assets. This may be particularly troublesome in rural areas that were sparsely populated and had few public facilities prior to mineral development. However, this does not appear to have been a significant problem for the cities, school districts, and counties analyzed in the impact studies discussed above, which generally were able to obtain financing based on anticipated property or sales tax revenues. Where the limited capital base of the local unit poses a problem, the State itself could provide security or serve as the financing agency.

Generally, however, the States have been unwilling to finance continuing or front-end costs of local units of government unless the local unit has demonstrated that it is unable, and not just unwilling, to finance those costs itself. The State governments apparently feel that most local units can handle the problems themselves, using incre-

[129] See the studies cited in note 126.

[130] Hearings on S. 1493 before the Subcomm. on Regional and Community Development of the Senate Comm. on Envir. & Public Works, Ser. No. 95-H28, 95th Cong., 1st sess. 54 (1977).

[131] See Colorado Legislative Council, note 114, at 101; Richards, note 121.

[132] Real Estate Research Corporation, note 126.

mental revenues derived from property and sales taxes on the mineral-related activity, issuance of bonds in anticipation of such revenues, and issuance of bonds for construction of public utilities to be repaid out of fees and charges for the services provided by such utilities.

Thus, the States generally avoid automatic allocation of tax revenues to the local unit in which such revenues were generated, preferring to allocate revenues on a showing of need to overcome particular distribution and timing problems, The exceptions are the traditional sources of local revenue, the property and sales taxes. Even these are subject to limitations and equalization formulas in different States. Montana returns a very small portion— 1.5 percent until 1980 and none thereafter—of its coal severance tax revenue to the county in which the coal was produced. These direct automatic allocations are made without any showing of need and may be more or less than what is actually needed by a particular local unit, '

The bulk of State assistance to local units of government is provided under discretionary allocations that can be used to overcome the distribution and timing problems associated with automatic allocations. Even these discretionary allocations are limited to a relatively small part of the incremental tax revenue generated by mineral activity in a State.

For example, Colorado has recently amended its mineral taxation laws by imposing severance taxes on the production of metallic minerals, molybdenum [treated distinctly although it is a metallic mineral), and oil shale for the first time and greatly increasing the existing severance tax on coal to a level just below North Dakota's coal severance tax. Property taxes on metallic mineral properties can be credited against half of the metallic mineral severance tax due, and 87.5 percent of property taxes on oil and gas properties, excluding equipment, can be credited against oil and gas severance taxes due. The revenues from the mineral severance taxes are distributed as shown in table 6.2. [134]

As table 6.2 shows, the Colorado legislature has determined that only 10 to 45 percent (depending on the mineral) of Colorado's new, incremental severance tax revenues are needed to assist local governments affected by mineral development activity prior to June 30, 1981. No revenues are allocated to the local government fund after June 30, 1981, although the legislature may change the allocation formula prior to then. Larger amounts, decreasing from 40 to 70 percent (depending on the mineral) in fiscal 1978 to 20 to 50 percent in fiscal 1981 and zero percent thereafter, are allocated to the State's general fund to support current State programs unrelated to local socioeconomic impact. Finally, substantial amounts, increasing from 15 to 40 percent (depending on the mineral) in fiscal 1978 to 35 to 40 percent in fiscal 1981 and 100 percent thereafter, are allocated to a trust fund, which "is to be perpetual and held in trust as a replacement for depleted natural resources. " The income from the investment of trust funds is to be deposited in the general fund,

As was discussed in subsection 1, the use of mineral severance tax revenues, rather than generally applicable property, sales, and income tax revenues, to fund

[133] See the studies cited in note 126.

[134] Colo. Rev. Stat. 39-29-101 to 39-29-114 (Supp. 1977)

Table 6.2 .—Allocation of Colorado Mineral Severance Tax Revenues
(percent)

| | Oil & gas | Coal | Oil shale | Molyb-denum | Other metallics |
|---|---|---|---|---|---|
| Fiscal years 1978 and 1979 | | | | | |
| General fund | 100 | 40 | 40 | 70 | 40 |
| Trust fund | — | 15 | 40 | 20 | 15 |
| Local government fund | — | 45 | 20 | 10 | 45 |
| Fiscal year 1980 | | | | | |
| General fund | 100 | 30 | 40 | 60 | 30 |
| Trust fund | — | 25 | 40 | 30 | 25 |
| Local government fund | — | 45 | 20 | 10 | 45 |
| Fiscal year 1981 | | | | | |
| General fund | 100 | 20 | 40 | 50 | 20 |
| Trust fund | — | 35 | 40 | 40 | 35 |
| Local government fund | — | 45 | 20 | 10 | 45 |
| | — | — | — | — | — |
| | 100 | 100 | 100 | 100 | 100 |
| | — | — | — | — | — |

current (through the general fund) and future (through the trust fund) State programs unrelated to coping with the socioeconomic impact of mineral development is in effect a forced subsidization by mineral producers, and hence consumers across the Nation, of a high level of State spending on behalf of its citizens into the indefinite future. The mineral activity expands the economy and the traditional property, sales, and income tax base of the State, thereby reducing the burden on the individual State citizen. Any incremental socioeconomic burden can usually be handled through the incremental property, sales, and income tax revenue. If those sources are insufficient, a mineral severance tax to meet the deficiency is justified. But any mineral severance tax in excess of the amount required to meet a deficiency in the traditional sources of revenue, generally applicable to all industries, is in essence a penalty or “double dip” imposed on the very industry that is responsible for more jobs and income in the State. It is a tax on consumers across the Nation to subsidize citizens in a particular State, a tax unrelated to any adverse effects of mineral activity and imposed on wealth that would never be produced if the minerals “lost”’ by mining were instead left forever in the ground,

The Colorado mineral severance tax revenues allocated to the local government fund are distributed to the counties and municipalities affected by mineral development in two different ways. Fifteen percent of the local government fund, or 1.5 to 6.75 percent (depending on the mineral) of total severence tax revenues for minerals other than oil and gas, are automatically distributed to the counties and municipalities in proportion to the number of employees of each mine or related oil shale facility who reside in each county’s unincorporated area or in each municipality. Thus, dollars are appropriately distributed to the local units of government that bear the burden of the (mine-related only) population influx rather than those that happen to contain the mine. The remaining 85 percent of the local government fund, or 8.5 to 38.25 percent (depending on the mineral) of total non-oil-and-gas severance tax revenues, is distributed at the discretion of the executive director of the Department of Local Affairs to those local units socioeconomically impacted by mineral and related energy develop-

ment, to be used by them for the planning, construction, and maintenance of public facilities and the provision of public services. The executive director receives advice from an energy impact assistance advisory committee which, among other things, makes recommendations on the extent of local tax resources available to each local unit of government and the extent of tax effort made by each local unit in solving impact problems.

Montana allocates even less of its severance tax revenues to local impact assistance. The allocation of revenues from the coal severance tax is shown in table 6.3. Article IX, section 5 of the Montana Constitution, which became effective in 1977, requires that at least 25 percent (50 percent after 1979) of all coal severance tax revenues be placed in a trust fund, the principal of which "shall forever remain inviolate unless appropriated by a vote of three-fourths of the members of each house of the legislature. " The income from the trust fund may be appropriated by the legislature for any purpose. The county where the coal is mined automatically receives 1.5 percent (none after 1979) of the coal severance tax revenues, Another 9,75 percent (none after 1979) is allocated for reconstruction of primary and secondary highways adversely affected by coal development (Federal matching funds will provide three-fourths of the sums required for road reconstruction). The minimum 7.225 percent (10 percent after 1979) allocated to the education trust fund is absolutely inviolate under the Montana Constitution, except that income from the fund can be used to support the State's public schools and university system. The 7.5 percent (5 percent after 1979) allocated to the school equalization fund might benefit some affected school districts. The maximum 12,65 percent (8.75 percent after 1979) allocated for 1ocal impact assistance is distributed to local units of government at the discretion of the Coal Board, which must consider the degree of effort by local units to deal with impact problems and must distribute at least one-half of the grants to local units experiencing a population growth of at least 10 percent during any three years since 1972. The Coal Board requires an applicant to show that Federal funds were sought prior to requesting State funds. Unused impact funds are dedicated to the education trust fund. '

Montana's separate resource indemnity trust tax, a severance tax applicable to all minerals, is used to fund a resource indemnity trust fund. The income from fund investments, plus the tax receipts themselves once the fund reaches $100 million, is used to "improve the total environment and rectify damage thereto, " Proceeds from another tax, on sales of electrical energy produced in the State, are placed in the general fund. [136]

Montana has addressed the front-end money problem by authorizing counties that will be substantially and adversely affected by the construction or operation of a major new industrial (including mining) facility to require prepayment, as needed, of three times the estimated property tax due the year the facility is completed. One-fifth of the amount prepaid can be credited against property taxes due in each of the first 5 years of the facility's operation. Voluntary prepayment of taxes for other new mineral-related facilities is encouraged by the provision for reduction of assessed valuation from 30 to 7 percent for the first 3 years of operation if the facility will not create an adverse impact on local services, or if the owner agrees to prepay taxes "sufficient to

[136] Mont. Rev. Code 84-1319, 50-1806(4), 50-1807, 50-1810 (Supp. 1977); hearings on S. 1493, note 130, at 45.

[137] Johnson and White, note 126, at 50-51.

Table 6.3.—Allocation of Montana Coal Severance Tax Revenue
(percent)

| Fund | 1977-79 | 1980 and thereafter |
|---|---|---|
| Natural heritage trust fund | 25.0 | 50.0 |
| School equalization | 7.5 | 5.0 |
| Local Impact and education trust | 19.875 | 18.75 |
| Minimum to education trust | 7.225 | 10.0 |
| Maximum to local Impact | 12.65 | 8.75 |
| Coal area highway improvement | 9.75 | — |
| County where coal is mined | 1.5 | |
| General county land planning | 0.75 | 0.5 |
| Alternative energy research | 1.875 | 2.5 |
| Renewable resource development, | 1.875 | 1.25 |
| Parks, historical & cultural sites | 1,875 | 2.5 |
| General fund | 30.0 | 19.5 |
| Total | 100,0 | '1 00.0 |

satisfy tax requirements caused by the location and construction of the facility during the construction period. [137]

North Dakota distributes its coal severance tax revenue in the same general manner as Colorado and Montana. Twenty percent is allocated automatically to the county in which the coal was produced. Another 35 percent is allocated to a special fund for discretionary distribution by the coal development impact office to local units of government affected by coal development. Fifteen percent is allocated to a trust fund, income from which is deposited in the State's general fund. Loans, but not grants, can be made to impacted local units from the trust fund. The remaining 30 percent is deposited directly in the general fund. The State also allocates 35 percent of the revenue from a coal conversion privilege (franchise or license) tax to each county containing coal conversion facilities. Each county receiving automatic allocations of severance tax or conversion privilege tax revenues must distribute 30 percent of all such revenues to county school districts in proportion to their attendance, 40 percent to the county general fund, and 30 percent to the incorporated cities in the county in proportion to their population. [138]

Wyoming has a three-tiered severance tax, according to which a) all mineral production is taxed at 2 percent of gross value, b] fossil fuel minerals (coal, oil, gas, oil shale, tar sands) and trona are taxed an additional 2 percent, and c) coal is taxed yet another 2 percent (the tax was phased in over a 5-year period from 1974 to 1978) until total revenues collected under this third tax reach $120 million, at which point the tax terminates. The revenue from the first tax is deposited in the State's general fund. The revenue from the second tax is deposited in a Permanent Mineral Trust Fund, income from which is deposited in the general fund. The legislature may provide for loans from the fund to local units of government, and use of one-fourth of the fund for such purpose has been authorized (see the next paragraph). The revenue from the third tax is allocated to a special account for discretionary distribution by the Farm Loan Board, through direct grants or pledges of security, to local units of government directly or in-

[137] Ibid., at 47-48, 50; Colorado Legislative Council, note 114, at 104-105.

[138] N. Dak. Cent. Code 57-60-15, 57-60-14, 57-62-01 (Supp. 1977).

directly affected by the production of coal, to assist in financing public water, sewer, highway, road, or street projects, At least 60 percent of the revenue must be used to finance highway, road, or street projects. Local units will not receive assistance for any project unless they show that the project is necessary, that all available sources of local revenue have been or will be fully utilized, and that local revenues are insufficient. [139]

Wyoming also established a Community Development Authority, which was authorized to issue up to $100 million in State bonds. The proceeds were to be used to make loans to local units of government to cover the front-end costs of acutely needed public facilities that could not be provided for through conventional planning or financial sources. Bonds were to be repaid out of the revenues and receipts derived from the facilities, other sources of local revenue, or from a special reserve fund that could be established using one-fourth of the 2-percent severance tax on fossil fuel minerals and trona. The Community Development Authority was also authorized to provide assistance to the private sector housing market in areas impacted by mineral development by making loans—when private financial resources were inadequate to furnish housing needed in such areas—to mortgage lenders, under certain restrictions on the use of such loans and limitations on interest rates that could be charged.[140] Recently, however, the Wyoming court ruled that the Community Development Authority provisions are invalid under the Wyoming constitution.

Wyoming has adopted a number of other measures to increase local revenues (e.g., the local share of the sales tax was increased from one-sixth to one-third) and to provide for distribution of local revenues to those local units that need them. Prominent examples of laws enacted to deal with the distribution problem are the Joint Powers and Joint Facilities of Governments Acts, which allow local units of government—counties, cities, school districts, and other special districts—to pool their revenues to construct and operate public facilities. Thus, a county, which gets the property tax revenue from mineral projects, may now be expected by the majority of its voters (who reside in its cities) to share its wealth with the cities, which bear the burden of the population influx.[141]

In sum, State and local sources of mineral-related revenue seem more than adequate to cope with the environmental and socioeconomic impact of mineral development on Federal and non-Federal (onshore) land. Furthermore, as the preceding discussion indicates, the problems of distribution and timing flow mainly from restrictions and divisions of responsibility imposed by State law and, therefore, are most appropriately handled by the States themselves rather than through Federal intervention. [142]

### 3. Magnitude and Disposition of Federal Revenues Received Under the Onshore Mineral Disposal Laws and Related Federal Laws

The Mineral Leasing Act of 1920 accounts for almost all the revenue received by the Federal Government under the Federal onshore mineral disposal laws. Over $3.2

[139] *Colorado Legislative Council*, note 114, at 37-38, 110-111; Resource Management Systems, note 126, at 69-70.

[140] *Colorado Legislative Council*, at 101, 108-109; *Resource Management Systems*, at 64-67.

[141] *Colorado Legislative Council*, at 109-110; *Resource Management Systems*, at 57-74, especially 57-60 and 70-71.

[142] See also *GAO Socioeconomic Issues Study*, note 40, at 53-59.

billion in revenue had been generated under the Act between 1920 and the end of FY 1976, '43 even though, as is discussed in chapter 4, rentals and royalties were kept at low or minimum levels for most of this period.

Until late in 1976, the Act required that 37.5 percent of all revenues (sales, bonuses, rentals, and royalties) received under the Act be returned to the respective States in which the revenue was generated to be used as each State legislature might direct "for the construction and maintenance of public roads or for the support of public schools or other public educational institutions. ''14' The intent behind this requirement was to help the States with the increased demand for and burden on public roads and schools resulting from mineral activity under Federal leases.

From 1920 to June 30, 1976, over $1.3 billion of public domain mineral leasing revenues were distributed to the Western States for road and school purposes. Seven States received in the aggregate almost 97 percent of the distributed revenue, or over $50 million each: Alaska ($124 million), California ($118 million], Colorado ($184 million), Montana ($61 million), New Mexico ($278 million), Utah ($82 million), and Wyoming ($443 million). Each of the seven States received over $1 million in FY 1976: Alaska ($2 million), California ($7 million), Colorado ($34 million), Montana ($5 million), New Mexico ($28 million), Utah [$6 million), and Wyoming ($38 million)."s

Another 52.5 percent of the public domain mineral leasing revenues was dedicated to construction of irrigation projects to reclaim arid or semiarid western land and render it cultivable under the Reclamation Act of 1902.

Altogether, 90 percent of the public domain mineral leasing revenues was returned directly or indirectly to the Western States. The remaining 10 percent was deposited in the Treasury of the United States as part of the general fund.

Late in 1976 the Mineral Leasing Act of 1920 was amended by increasing the States' direct share of the revenues from 37.5 to 50 percent and decreasing the share dedicated to the reclamation (irrigation project) fund from 52.5 to 40 percent. (Both before and after the amendment, Alaska received directly 90 percent of the revenues generated in Alaska, since the Reclamation Act does not apply to Alaska. ) The Federal Government still retains only 10 percent of the revenue.[146]

In addition, Congress, recognizing that the socioeconomic impacts of mineral activity today are not limited to impacts on roads and schools, broadened the permissible use of each State's direct 50-percent share to include "[i) planning, (ii) construction and maintenance of public facilities, and (iii) provision of public service" by the State and its subdivisions, "as the legislature of the State may direct giving priority to those subdivisions of the State socially or economically impacted by development of minerals leased under this Act. " Alaska is not restricted in the use of its 90-percent share. '47

Congress also made mineral revenues received under the Geothermal Steam Act of 1970 subject to the same 50-40-10 (90-10 in Alaska) distribution formula, including

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[14] U.S. Bureau of Land Management, *Public Land Statistics, 1976*, table 114 (1977).

[15] Act of Feb. 25, 1920, § 35, 41 Stat. 437, 450 (1920).

[16] *Public Land Statistics*, note 143, table 120.

[17] Although several laws amended the revenue distribution scheme in 1976, the final comprehensive amendment was subsec. 317(a) of the Federal Land Policy and Management Act of 1976, codified at 30 U.S.C. § 191 (1976).

[18] Ibid.

the same restrictions on use and the same directions on priority of distribution. However, apparently due to a drafting error, the priority of distribution does not extend to areas impacted by geothermal steam development, as the priority applies only to areas "impacted by development of minerals leased under this [1920 Mineral Leasing] Act. "[148]

Finally, Congress addressed the front-end money problem—the problem of obtaining funds needed to construct, expand, or improve public facilities or services prior to the time mineral-related revenues are received—by authorizing the Secretary of the Interior to "make loans to States and their political subdivisions in order to relieve social or economic impacts occasioned by the development of minerals leased in such States pursuant to the [Mineral Leasing Act of 1920]. "[149] (Note again the probably inadvertent omission of impacts occasioned by the development of geothermal steam under the Geothermal Steam Act of 1970. ) The loans, which bear a maximum interest rate of 3 percent, cannot exceed the anticipated Federal mineral revenues (under the Mineral Leasing Act of 1920) to be received during any prospective 10-year period by the loan recipient (loans to Alaska cannot exceed 55 percent of anticipated Federal mineral revenues), must be confined to the uses specified for such Federal mineral revenues (planning, construction, and maintenance of public facilities, and provision of public services), and must be repaid from such Federal mineral revenues to be received by the loan recipient, The Secretary must, after consultation with the Governors of the affected States, "allocate such loans among the States and their subdivisions in a fair and equitable manner, giving priority to those States and subdivisions suffering the most severe impacts, " All loans shall be subject to such terms and conditions as the Secretary determines necessary to assure that the purposes of the loan program will be achieved.

The Mineral Leasing Act of 1920 applies only to public domain land. The Geothermal Steam Act of 1970 applies to public domain and acquired land. [150] More than 92 percent of the Federal onshore land is public domain land, 1[51] and the Mineral Leasing Act of 1920 and the Geothermal Steam Act of 1970 account for over 90 percent of Federal onshore mineral revenues. [152]

Minerals, other than geothermal steam, on acquired land are leased under a variety of statutes, primarily the Mineral Leasing Act for Acquired Lands of 1947. Revenues from these leases are distributed in the same manner as other receipts from the affected land.[153] Almost all of the acquired land mineral leases are in national forests, and generally 25 percent of all receipts from a national forest are returned "to the State in which such national forest is situated, to be expended as the State legislature may prescribe for the benefit of the public schools and public roads of the county or counties in which such national forest is situated."[154] Total revenues received by the Federal Government in 1976 from all mineral leases on acquired land were just over $17 million, with receipts of over $1 million in only four States: Louisiana ($2.8 million), Mississippi ($1.9 million), Missouri ($4.9 million), and North Dakota ($3.1 million).[155]

[148] Ibid.

[149] Federal Land Policy and Management Act of 1976, § 317(c), codified at 43 U.S.C. § 1747 (1976).

[150] See ch. 2, subsec. D(3) for an explanation of the distinction between public domain and acquired land.

[151] *Public Land Statistics*, note 143, table 7.

[152] Ibid., tables 81, 112, 113.

[153] 30 U.S.C. § 355 (1976) ("ordinary" leasable minerals); Reorganization Plan No. 3 of 1946, § 402, 60 Stat. 1099 (1946) (hardrock minerals).

[154] 16 U.S.C. § 500 (1976).

[155] *Public Land Statistics*, note 143, table 113.

Common-variety minerals such as sand and gravel are sold under the Surface Resources Act of 1955, which provides that all receipts from such sales shall be distributed in the same manner as receipts from the sale of public lands, except that receipts from sales on national forest and other lands administered by the Secretary of Agriculture shall be distributed in the same manner as other receipts from such lands. '5' The distribution of receipts from national forest land was discussed in the preceding paragraph. Generally, 5 percent of the net proceeds from the sale of public land are returned to the State in which the land is located "for the purpose of education or of making public roads and improvements.''[157] Total revenues from common-variety mineral sales on public land were just under $11 million in 1976, with almost $10 million accruing from sales in Alaska, [158]

The only Federal revenue received under the Mining Law of 1872 is the nominal $2.50 or $5 per acre charged for a patent, which would amount to a maximum revenue of just under $20,000 for the 3,881 acres patented in 1976. [159] Presumably, the States receive 5 percent of this revenue because it results from a "sale" of public land.

Almost all of the revenues collected under the Federal onshore mining and mineral leasing laws have been revenues from oil and gas leasing. For example, in FY 1976 oil and gas leases accounted for more than 88 percent of total Federal onshore mineral revenues.[160] In the future, revenues from other minerals, especially coal, will be much more significant in terms of absolute size and relative importance than they have been in the past, for two reasons. First, as is discussed in chapter 4, bonuses and royalties for minerals other than oil and gas have been set at very low levels in the past—usually only a few cents per ton compared to the minimum 12.5 percent of value required for oil and gas—but are currently being raised to much higher levels. The Federal Coal Leasing Amendments Act of 1976 requires a minimum royalty of 12.5 percent of value for all surface-mined coal produced under Federal coal leases issued after August 1976. [161] Second, oil and gas production from onshore Federal land, excepting Alaska, is probably past its peak, while large resources of the other minerals have yet to be tapped.[162]

In addition to the States' direct and indirect shares in Federal onshore mineral revenues, Federal funds are allocated to the States and their subdivisions through the Payment in Lieu of Taxes Act of 1976 and the Surface Mining Control and Reclamation Act of 1977.

The Payments in Lieu of Taxes Act of 1976 is intended to compensate units of local government for the loss in property tax revenue resulting from the tax immunity enjoyed by Federal land. 'b' The Act provides for an annual payment to each unit of local government that contains Federal land (a) which is in the National Park System or the National Forest System or is administered by BLM, (b) which is part of a water resource development project of the Bureau of Reclamation or the Army Corps of Engineers, or (c) which is part of a dredge disposal area under the jurisdiction of the Army

[157] 30 U.S.C. § 603 (1976).
[158] 31 U.S.C. § 711(17) (1976); 43 U.S.C. § 391 (1976).
[159] *Public Land Statistics*, note 143, table 81.
[160] Ibid., table 82.
[161] Ibid., tables 81, 112, 113.
[162] 90 Stat. 1087 (1976), codified at 30 U.S.C. § 207(a) (1976).
[163] See app. A.
[164] H.R. Rep. No. 94-1106, 94th Cong. 2d sess. (1976), see sec. C.

Corps of Engineers, Such land is called entitlement land, and it includes almost 92 percent of all Federal onshore land. [164]

Each local unit of government must be paid $0,75 for each acre of entitlement land located within its boundaries (subject to a sliding-scale maximum payment based on the unit's population, ranging from $50 per person for any unit with a population of 5,000 or less to $1 million for a unit with a population of 50,000 or more), less any payments received by the unit during the preceding year under the Mineral Leasing Act of 1920, the Mineral Leasing Act for Acquired Lands of 1947, the Surface Resources Act of 1955 (common-variety minerals), or certain acts providing for distribution of national forest, grazing, and powersite receipts, The per-acre payment cannot be reduced below $0.10 per acre, but no payment can be made to a unit of government if the total payment that would be due would be less than $100. Where entitlement land is located in two local units concurrently—for example, a town and a county—the payment for that land must go to the geographically smaller unit. The payments may be used for any governmental purpose.

Because the per-acre payments are made directly to the local units of government, they provide an assured source of revenue on which those local units can depend for financing of public facilities and services required as a result of activity on nearby Federal land (although such activity, if private, is itself taxable by the local units—see section C). To assure a stable source of revenue, Congress provided for deductions from the per-acre payments only for Federal mineral (and certain other) revenues actually received by the local units, since it recognized that the 50-percent share of Federal mineral revenues returned to the State governments, although meant to be used to relieve local socioeconomic burdens caused by Federal mineral development, is rarely devoted to that purpose.[165] Unfortunately, however, the limitation on deductions further encourages the States to withhold Federal mineral revenues from the local units. Federal mineral revenues that are not withheld by a State are deducted from the per-acre payments to the local units and hence are unnecessarily lost to the State, whereas the withholding of Federal mineral revenues does not hurt the local units as long as the sums withheld amount to less than the equivalent of $0.65 (the $0.75 maximum minus the $0.10 minimum) for each acre of Federal land in each local unit. The local units will simply receive those sums from the Federal Government as a payment in lieu of taxes instead of receiving them from the State government.

Projected total annual payments under the Payments in Lieu of Taxes Act exceed $100 million. The biggest gainers would be the 11 contiguous Western States and Alaska, which would each receive over $3 million annually: Alaska ($5 million), Arizona ($9 million), California ($11 million), Colorado ($11 million), Idaho ($9 million), Montana ($9 million), Nevada ($6 million), New Mexico ($1 1 million), Oregon ($5 million), Utah ($7 million), Washington ($4 million), and Wyoming ($5 million).[166]

The Surface Mining Control and Reclamation Act of 1977 provides for annual grants to any State to help it develop, administer, and enforce its statewide reclama-

[164] 31 U.S.C. §§ 1601-1607 (1976); *Public Land Statistics*, note 143, table 8.

[165] S. Rep. No. 94-1262, 94th Cong., 2d sess. 9, 15 (1976); H.R. Rep. No. 94-1106, 94th Cong., 2d sess. 12 (1976); see hearings on S. 1493, note 130, at 51, 77, 229-230, 289.

[166] H.R. Rep. No. 94-1106, 94th Cong., 2d sess. 19-30 (1976).

tion program for Federal and non-Federal land disturbed by coal mining. The grants may cover up to 80 percent of a State's total costs during the first year, 60 percent during the second year, and 50 percent each year thereafter. Moreover, the State may receive a grant for 100 percent of the funds that would have been spent by the Federal Government in administering Federal reclamation requirements on Federal land (including land containing reserved Federal mineral interests) if the State elects to enforce such requirements itself.[167]

The Surface Mining Control and Reclamation Act also provides for Federal and State abandoned mine reclamation funds, consisting primarily of revenue derived from a reclamation fee of $0.35 per ton of surface-mined coal and $0.15 per ton of underground-mined coal, or 10 percent of the gross value of the coal, whichever is less, except for lignite coal, for which a fee of $0.10 per ton, or 2 percent of the value, is imposed.[168] The fee is imposed on all coal mined in the United States, and it was projected at the time the fee was enacted that it would yield approximately $250 million per year.[169]

Fifty percent of the reclamation fees collected annually in any State must be allocated to that State's abandoned mine reclamation fund. The State fund must be used to reclaim land mined for coal and abandoned or otherwise left in an inadequate reclamation status prior to 1977; but if all such land in a State has been reclaimed, the State may use its 50-percent share of the reclamation fees for construction of specific public facilities in communities impacted by coal development if the State certifies, and the Secretary of the Interior agrees, that there is a need for such facilities and that impact funds available under the Mineral Leasing Act of 1920 or the Payments in Lieu of Taxes Act are inadequate for such construction,[170] Any funds not expended within 3 years are transferred to the general fund of the U.S. Treasury.

Since the Western States until recently have had very little coal mining, they have few abandoned, unreclaimed coal mines. They will therefore almost immediately be able to use their 50-percent share of the Federal reclamation fee (which is in addition to any State-imposed reclamation fee) for construction of public facilities needed in communities impacted by coal development. After establishing the need for specific facilities, they are entitled to use the funds to construct such facilities merely by showing that the impact funds available under the Mineral Leasing Act of 1920 or the Payments in Lieu of Taxes Act are inadequate for such construction, They need not show that funds derived from State and local property, income, sales, license, and severance taxes also are inadequate. They need not show that front-end loans against future Federal mineral revenues are inadequate (such loans, although tied to Leasing Act revenues, are authorized by the Federal Land Policy and Management Act rather than the Leasing Act itself). They may not even have to show that total revenues received under the Leasing Act and the Payment in Lieu of Taxes Act are inadequate; it may suffice to show that the portion of such total revenues allocated by a State for impact assistance is inadequate. As is discussed more fully below, the States generally allocate little if any of their share of Federal mineral revenues to local impact assistance.

[167] 30 U.S.C. § 1295 (Supp. I 1977); see ibid., §§ 1273(c), 1291(4).
[168] Ibid., §§ 1231, 1232.
[169] H.R. Rep. No. 95-218, 95th Cong., 1st sess. 145 (1977).
[170] 30 U.S.C. § 1232(g)(2) (Supp. I 1977).

Finally, the mineral-producing States receive general Federal revenue-sharing funds as well as grants or loans under specific Federal assistance programs for construction of transportation, health, pollution control, housing, recreational, and other facilities and for provision of services required by Federal projects. [171]

The increased bonuses and royalties for leasable Federal minerals, coupled with the increase (from 37.5 to 50 percent) in the producing States' direct share of the revenue collected by the Federal Government, will result in substantially increased revenue for States such as Colorado, Montana, New Mexico, North Dakota, Utah, and Wyoming, which are experiencing or expecting dramatic increases in Federal mineral production. Even before the increases in royalties and the States' share, each of these States except North Dakota received $5 to $38 million of Federal mineral revenue in FY 1976. '72 These same States plus other Western States will also continue to benefit from Federal irrigation projects funded by another 40 percent of the Federal mineral revenues (Alaska receives the 40 percent directly since it does not benefit from the Reclamation Act).

The national government will receive only 10 percent of the Federal mineral revenues, Citizens of the non-Western States will not likely benefit even from this 10 percent, because it is probably equivalent to or less than the costs of administering the Federal mineral leasing laws. Moreover, the Federal land management agencies themselves will not benefit directly from the 10 percent retained by the Federal Government, since that 10 percent is deposited as miscellaneous receipts in the general fund of the U.S. Treasury. Funds for administering the Federal mineral laws are independently allocated by Congress, and those funds in the past have been grossly inadequate to provide the staff and services required for effective administration of the laws. [173]

The primary goal of payment requirements under the Federal mineral laws should be assurance of efficient and equitable mineral and nonmineral resource use and management. ]" Yet almost no payments are required to be made for damage to or loss of nonmineral resources owned by the Federal Government, [175] and none of the revenues received from mineral value payments are used to compensate for such damage or loss. This leads not only to underpricing and hence inefficient use of Federal mineral and nonmineral resources, but also to an understandable inclination on the part of Federal surface management agencies to prohibit or discourage mineral activities. [176]

The 40 percent of mineral revenues dedicated to construction of irrigation projects in the Western States under the Reclamation Act of 1902 does not assure efficient and equitable resource use and management on Federal land, but rather constitutes a subsidy of farming interests in the Western States by the general public, which owns the Federal mineral resources.

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[171] See, e.g., *GAO Socioeconomic Issues Study*, note 40, at 44-47. See also the sources cited in note 126.

[172] See the text associated with note 145.

[173] See, e.g., U.S. National Aeronautics and Space Administration, *Onshore Lease Management Program Study for the U.S. Geological Survey* (December 1974); U.S. Geological Survey, *Conservation Division Task Force Report on the Onshore Lease Management Program Study* (May 1975); U.S. General Accounting Office, *Acreage Limitations on Mineral Leases Not Effective*, RED-76-117, June 24, 1976; U.S. General Accounting Office, *Modernization of 1872 Mining Law Needed to Encourage Domestic Mineral Production, Protect the Environment, and Improve Public Land Management*, B-118678, July 25, 1974; Senzel, *Revision of the Mining Law of 1872*, Pub. No. 95-11, Senate Comm. on Energy & Nat. Res., 95th Cong., 1st sess. 22-23 and n. 18 (Comm. Print 1977).

[174] See ch. 4, subsec. E(1).

[175] See ch. 5, subsecs. D(6) and E(6); subsec. D(1) of this chapter.

[176] See ch. 5, sec. G.

The 50 percent (90 percent in Alaska) of mineral revenues returned directly to the mineral-producting States would promote efficient and equitable resource use if those funds were necessary and actually used to prevent or reduce the adverse socioeconomic impacts of mineral activity on Federal land. But, as was discussed in subsection 2, the States can obtain, and most of the major mineral-producing States do obtain, more than adequate revenue to cope with such impacts through State and local mineral-related taxes. The States do not need the Federal revenues to cope with such impacts. If they actually use the Federal revenues for impact purposes, State mineral revenue that otherwise would or could have been used for such purposes are freed for general State spending programs. Thus, either way, the general public through the Federal Government ends up subsidizing State spending programs unrelated to coping with the socioeconomic impacts of developing Federal minerals.

Moreover, the States rarely use the Federal mineral revenues to assist the local units of government, which bear almost all the socioeconomic impact. Congress itself, as noted above, recognized this fact when it passed the Payments in Lieu of Taxes Act, although ironically this Act even further discourages State disbursements of Federal mineral revenues to local units by providing for deduction of such disbursements from the per-acre payments under the Act to the local units. [177]

Colorado probably has had some of the most generous provisions for distributing its share of Federal mineral revenues to impacted local units of government, yet even the Colorado provisions allocate only a small portion of the Federal mineral revenues to such units. Before 1977, two-thirds of the State's share of Federal mineral revenues other than revenues from oil shale leasing were returned directly to the county from which the revenues were derived, but no single county could receive more than $200,000 per year. In 1977, the direct allocation to the producing counties was reduced to 50 percent of the State's share (excluding oil shale revenues), subject to the same $200,000-per-year limitation. '7" Because of the $200,000 limitation, some major producing counties receive much less than 50 percent of the State's share of Federal mineral revenues derived from production within their boundaries. For example, Colorado received $11,845,528 and $1,204,109 as its share of Federal mineral revenues attributable to Rio Blanco and Moffat counties, respectively, in 1977,[179] but each county received only $200,000, or less than 2 percent and 17 percent, respectively. Although no other counties reached the $200,000 limitation, the State in the aggregate allocated only 12.5 percent of its $15,823,766 share of non-oil shale Federal mineral revenues to the counties.

The balance of the counties' 50-percent share in excess of the $200,000 per-county-limitation, plus another 25 percent of the State's non-oil shale Federal mineral revenue, is paid into the State's public school fund to be used for the support of public schools throughout the State. Fifteen percent of the State's non-oil shale Federal mineral revenue is allocated to the local government mineral impact fund for discretionary distribution by the executive director of the Department of Local Affairs. The executive director receives advice from an energy impact assistance advisory commit-

[177] See the text following note 165.
[178] Colo. Rev. Stat. 34-63-102 (Supp. 1978).
[179] Data supplied by U.S. Bureau of Land Management, Division of Finance, Washington, D.C., March 1978.

tee which, among other things, makes recommendations on the problems and needs of local units, the extent of local tax resources available to each local unit, and the extent of tax effort made by each local unit in solving impact problems. Priority in the distribution of sums allocated to the public school fund and the local government mineral impact fund is supposed to be given to those public schools and local units socioeconomically impacted by the development, processing, or energy conversion of minerals leased under the Federal Mineral Leasing Act of 1920. The remaining 10 percent of the State's non-oil shale Federal mineral revenues is allocated to the Colorado water conservation board construction fund. [180]

Colorado's share of the Federal oil shale leasing revenues is deposited in a special fund controlled by the general assembly (State legislature). The legislature has stated that it will make appropriations from the fund to State agencies, school districts, and other local units affected by development and production of energy resources from oil shale lands, primarily for use by such entities in planning for and providing facilities and services necessitated by such development and production and secondarily for other State purposes,]"' As of August 1977, Colorado had received approximately $74 mill ion in Federal oil shale leasing revenues, of which about $14 million had been granted or loaned to local units impacted by energy development on the western slope of the Rocky Mountains. [182]

Other States have not allocated any of their share of Federal mineral leasing revenues for impact assistance.

The Coastal States do not receive any portion of the Federal offshore mineral leasing revenues, even though these States can only tax the onshore facilities related to offshore production, not the offshore mineral facilities or the offshore mineral production itself, and yet bear the burden of population influxes caused by the construction and operation of such offshore facilities. Paradoxically, the Coastal and Inland States receive directly 50 percent (90 percent for Alaska) of the Federal onshore mineral leasing revenues, and indirectly through the reclamation fund another 40 percent, even though they can full tax the onshore mineral facilities and production and receive more than adequate revenue from such taxes to pay for the socioeconomic impact of the mineral activitv.

The distribution of Federal onshore mineral revenues raises serious equity issues, as only the Western States benefit from it although the Federal minerals are a national resource. The distribution is made without any showing of need (such a showing is extremely unlikely given the States' distribution of their own and the Federal mineral revenues) and at the expense of the Federal land management agencies and citizens of other States.

The inequity is compounded by the provision in the Surface Mining Control and Reclamation Act that allows the Western States to use funds, collected for the purpose of reclaiming abandoned coal mines, to construct public facilities needed in communities impacted by coal development. The States are not required to show that funds derived from State mineral-related taxes are inadequate to finance such facilities. They

[180] Colo. Rev. Stat. 34-63-102 (Supp. 1978).
[181] Ibid., 34-63-104.
[182] Hearings on S. 1493, note 130, at 231

may not even be required to show that Federal funds they received but did not allocate for impact purposes under the Federal Mineral Leasing and Payments in Lieu of Taxes Acts are inadequate to finance such facilities.'" Thus, the Western States may appropriate abandoned mine reclamation funds, at the expense of other States scarred by abandoned, unreclaimed mines, and use such funds instead of State mineral revenues that otherwise would have been needed to construct the facilities, thereby freeing the State revenues for general State spending programs. Once again, Federal revenues are subsidizing the Western States' general budgets.

Yet, the Western States continue to seek additional sources of Federal funding to cope with the socioeconomic impact of mineral activities, even while refusing to commit more of their own mineral-related revenues to that purpose.[184]

In sum, the Federal Government is less careful with its money than the Western States themselves, which, as has been discussed, automatically allocate very little of their (State or Federal) mineral revenues to impacted areas, but rather require such areas to show they have used all available local and Federal revenues before any discretionary State assistance is provided.

## F. Summary and Options

This section summarizes the material discussed in the previous sections of this chapter by presenting three major options for consideration. The options are presented in ascending degree of the amount and character of change involved when compared with the existing systems—no changes at all, moderate adjustments to the existing systems, and major adjustments. The options, other than the ''no change' option, are presented in skeletal form in table 1 at the end of the executive summary. In each option, an attempt is made to address questions of efficiency and equity arising from the current distribution of administrative responsibilities and mineral-related revenues,

### Option 1. The Existing Systems ("No Change" Option)

The institutional setting of Federal onshore mineral land management—that is, the division of authority horizontally among the Federal agencies and vertically between the Federal and State governments—is as critical as the substantive content of the laws. The historical development of the mineral laws and their administration has resulted in coordination difficulties along both dimensions.

Along the horizontal dimension, the traditional separation of mineral resource disposal and management from multiple-use management of nonmineral resources under the Federal land laws has been carried over into the administration of the mineral laws themselves. The mineral disposal and management function has been lodged in two agencies in the Department of the Interior. It has thereby been separated from the management of the various nonmineral resources by surface management agencies

[184] See the text associated with and following note 170.

[185] See, e.g., hearings on S. 1493, note 130.

such as the Forest Service and the Fish and Wildlife Service. Furthermore, the mineral leasing function entrusted to the Department of the Interior has itself been split into mineral (economic and engineering) aspects and nonmineral (surface impacts) aspects, with responsibility for mineral aspects given to USGS and responsibility for nonmineral aspects given to BLM. The new office of Surface Mining has a significant role in both the mineral and nonmineral aspects of coal mining operations. BLM is solely responsible for the mineral aspects of Mining Law activities, but it shares responsibility with some surface management agencies for the nonmineral aspects.

Because minerals are bound up in the land, mineral resource management invariably affects nonmineral resource management and nonmineral resource management often affects mineral resource management. During the era of extensive land disposal, these interrelationships were not of serious concern to most people, Given the current policy of retention and multiple-use management of Federal land, however, the formal separation of mineral resource management from nonmineral resource management and the formal distinction between "economic" (mineral-related) and "multiple-use" (nonmineral-related) aspects of mineral management itself quickly break down in practice, causing substantial coordination problems and preventing integrated management of Federal land resources.

These problems have been perceived by USGS and BLM, which have moved to joint responsibility for many aspects of mineral leasing on land under BLM's jurisdiction, despite the formally mandated separation of functions, However, in the creation of the Department of Energy by a new administration, the artificial distinction between ''economic" and "multiple-use land management" aspects of fuel mineral leasing was incorporated in the Department of Energy Organization Act, which transferred the "economic" aspects from the Department of the Interior to the Department of Energy. Now, two separate departments, rather than two agencies in the same department, must contend with this distinction and its adverse consequences for integrated land management.

Some recognition of the intimate connection between mineral resource management and overall land management has been provided by the requirement, in all recent mineral leasing laws, that mineral leases may be issued only with the consent of the surface management agency, and subject to such conditions as it may include to ensure adequate utilization of the land for the purposes for which it was acquired or is being administered. But this requirement as yet applies to only a few minerals and a few land categories, (Although there is no such formal requirement for land under BLM's jurisdiction, the same effect is achieved, because BLM is the mineral leasing agent for all Federal land as well as surface manager for its own land. )

The surface management agencies generally are not given any legal role in supervising compliance with surface use restrictions applied to mineral activities, although they have the expertise and are best located to enforce such restrictions, (The principal exception is the Forest Service's enforcement of surface use restrictions applied to mineral activities under the Mining Law in the national forests. ) Enforcement is rather the responsibility of USGS (except for surface impacts of coal mining operations, which are the responsibility of the Office of Surface Mining), which has a

mineral-related expertise and mission, and often has neither an office near nor familiarity with the area under lease.

Along the vertical dimension of the institutional framework, the coordination problems are even more complex. Mineral activities on Federal land can have substantial effects on local and State economies and ways of life, which under our Federal system of government are the primary concern and responsibility of local and State governments.

Generally, the existing mineral laws strike a reasonable balance between Federal and State regulatory jurisdiction over private mineral activities on Federal land. The laws explicitly or implicitly allow the States to impose more stringent restrictions than those imposed by the Federal Government, as long as the State restrictions do not conflict with the Federal ones and do not disrupt Federal land management.

There are, however, some problems with respect to State regulation of mineral activities on Federal land. The most obvious are the anachronistic provisions in the Mining Law for a) State specification of procedures for locating and maintaining claims and b) State insertion of development conditions in patents. Less obvious, but potentially troublesome, are the provisions in the Surface Mining Control and Reclamation Act of 1977 that a) allow private owners of the surface overlying Federal coal to veto surface mining of such coal (and hence extract the value of the federally owned coal as well as the value of the privately owned surface as the price for not exercising the veto) and b) allow the States to take over enforcement of Federal reclamation standards on Federal land (even though many State enforcement programs are underfunded, understaffed, and vulnerable to conflicts of interest).

More serious issues are raised by State taxation of mineral activities on Federal land and by the distribution of Federal revenues generated under the mineral laws.

State severance taxes and other mineral-related taxes based on the gross amount or value of production are in effect gross royalties and can have the adverse anticonservation effects on mineral and nonmineral resources associated with gross royalties. The tax levels in some States are so high that they may prevent mining of some Federal mineral deposits and may cause mining of only the high-grade portions of other deposits. They also may inflate the prices paid by consumers and reduce Federal mineral revenue.

None of the Federal revenues generated under the mineral laws are retained by the Federal agencies administering the laws to pay for the costs of such administration, which is often substantially underfunded. None of the revenues are turned over to the surface management agencies to be used to repair damage to surface resources or to replace resources lost as a result of mineral activities. Only 10 percent of the revenues is retained by the Federal Government to be deposited in the general fund of the Treasury. The remaining 90 percent is channeled by law to the Western States, either directly through payments to the States themselves or indirectly through the Reclamation Fund to subsidize irrigation projects.

The Federal mineral revenues, and additional Federal funds derived from fees imposed on surface coal miners by the Surface Mining Control and Reclamation Act, are

turned over to the Western States to enable them to cope with the adverse socioeconomic impacts of mineral activities on Federal land, But the funds are made available without any showing of need, and, in fact, the major mineral-producing States receive more than adequate revenue from State mineral-related taxes to cope with adverse socioeconomic impacts. (Generally, the problem is not insufficient State revenue, but rather ensuring that such revenue reaches the local unit of government that needs it, in a timely manner. ) The Federal revenues thus subsidize the general budgets of these few States at the expense of citizens across the Nation.

### Option 2. Moderate Adjustments to the Existing Systems

Horizontal coordination among Federal agencies could be improved by extending the requirement of consent by the surface management agency to the issuance of a mineral lease from the few situations in which it now applies to all mineral leases (and to mining claims if access under the Mining Law is also made discretionary] and by giving the surface management agency joint or sole responsibility for enforcing the surface use restrictions on a mining claim or mineral lease.

Vertical coordination between the Federal and State levels of government could be improved by eliminating State authority under the Mining Law to specify procedures for locating and maintaining claims and to insert development conditions in patents, by requiring Federal surface management agencies to perform "backup" inspections of reclamation of surface-mined Federal coal land when the State has taken over responsibility for enforcement of reclamation, and by encouraging Federal and State efforts to develop coordinated planning and permitting procedures.

In addition, rentals or other payments by mineral explorers or producers designed to compensate for damage to or loss of nonmineral values could be turned over to the Federal surface management agency rather than to the State, with a stipulation that such payments be used to restore or replace the damaged or lost nonmineral values. The 10 percent of the Federal mineral revenues now placed in the Federal general fund, or such smaller or larger percentage as seems appropriate, could be retained instead by the agency or agencies responsible for administering the mineral laws, in order to provide more adequate funding for such administration.

The remainder of the Federal mineral revenues could be allocated to the States affected by mineral activities on Federal lands, but only to the extent needed to cope with adverse socioeconomic impacts that cannot be handled by the States themselves through their own mineral taxation systems, The balance of the revenues not allocated to the Federal agencies or the States could be placed in the Federal general fund.

### Option 3. Major Adjustments

At the Federal level, more integrated management of mineral and nonmineral resources on Federal land could be promoted by revoking the recent transfer of certain fuel mineral leasing functions from the Department of the Interior to the Department of Energy, and by making each surface management agency fully responsible for admin-

istration of the Federal mineral laws on land under its jurisdiction. The roles of USGS, BLM (on land not under its jurisdiction), and the Department of Energy would be reduced to those of advisors and coordinators on issues within their expertise, unless a surface management agency should ask them to take a more active role (for example, agencies administering small, isolated tracts of land might want to have BLM administer the mineral laws on such land).

Finally, all grants of Federal mineral revenues to the producing States could be abolished. States would have to use the revenues derived from their own mineral-taxing powers to cope with the adverse socioeconomic impacts of mineral activities. Thus, they would not be able to make the Federal minerals bear a disproportionate share of the costs of coping with impacts caused by mineral activities on non-Federal as well as on Federal lands, Federal loan programs could be adopted to provide funds needed for planning and construction by impacted communities prior to receipt of the substantial revenues anticipated from State taxes on mineral production.