



COMPTROLLER GENERAL OF THE UNITED STATES  
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The Honorable Henry M. Jackson  
Chairman, Committee on Energy  
and Natural Resources  
United States Senate  
The Honorable Morris K. Udall  
Chairman, Committee on  
Interior and Insular Affairs  
House of Representatives

As you know, surface mining control and reclamation legislation, House bill 2 (which passed the House of Representatives on April 29, 1977) and Senate bill 7, have been proposed for control of lands mined for coal. Although no similar legislation is currently proposed for lands mined for noncoal minerals, we have noted that both bills state a need exists for more complete information on the mining of noncoal minerals in order to formulate Federal regulations governing such mining. The bills direct the Council on Environmental Quality to review the state of technology relating to the mining and reclamation of lands mined for noncoal minerals.

Recently, we made a survey of the reclamation of lands damaged in the mining of noncoal minerals. The purpose of our survey was to obtain general information on the environmental effects of mining operations in certain States and to identify the types of State controls established for the protection and reclamation of mined lands. In view of your Committees' interest in this matter, we believe the information we obtained may be helpful to you.

During our survey we visited a number of active and abandoned surface and underground mining sites in Colorado, Florida, Michigan, Minnesota, Wisconsin, and Wyoming to observe the effects of past and present mining operations for uranium, copper, phosphate, limestone, molybdenum, and iron. We found that:

--Significant amounts of land have been disturbed by surface mining of noncoal minerals but the majority of these lands are not covered by any legal requirements mandating its reclamation.

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--Development and implementation of land reclamation legislation at the State level have been slow; it varies extensively among the States; and land reclamation programs, where established, are limited.

--Federal guidance and assistance are needed to help insure that vast amounts of disturbed land are properly restored.

LAND DISTURBED BY MINING  
IS NOT BEING RECLAIMED

The Soil Conservation Service, Department of Agriculture, estimated that about 4.4 million acres of land in the United States had been disturbed by surface mining operations as of January 1, 1974. About 2.5 million acres, or 58 percent, of these lands have not been reclaimed. Of this amount, over 62 percent, or 1.6 million acres, was disturbed by mining for noncoal minerals. The Service estimated that only about 18 percent of the 1.6 million acres needing reclamation is covered by existing Federal or State laws.

Lands left unreclaimed and for which there is no statutory responsibility requiring reclamation are referred to as "orphan or abandoned lands." Abandoned lands often cause water and air pollution, limit higher alternative land uses, and present safety and health hazards. The States we visited had no comprehensive programs to reclaim orphan or abandoned lands. Moreover, the States had incomplete inventory information on the amount of unreclaimed land, its location, or the hazards posed by such lands. Generally the States expressed an interest in establishing programs to reclaim abandoned lands but did not have either sufficient personnel or adequate funds to do so. Therefore, unless coordinated governmental efforts to reclaim such lands are undertaken, and reclamation standards are established, the adverse impact associated with such lands will not only continue but will probably increase.

STATUS OF RECLAMATION LEGISLATION

National concern over the adverse effects of surface mining was expressed in the Appalachian Regional Development Act of 1965 which directed the Secretary of the Interior to survey surface mining operations and to develop recommendations for a long-range program for the reclamation and rehabilitation of surface-mined lands. In a 1967 report, the Secretary of the Interior estimated that about 90 percent of the lands disturbed

by surface-mining operations has been private land. The major authority and responsibility for monitoring and implementing land-reclamation laws rest with State and local governments. The Secretary reported that there was strong Federal interest in a program to restore lands damaged from past mining as well as to prevent future damage. It was concluded that, while much of the responsibility rests with State and local governments, landowners, and mining companies, in the absence of satisfactory State programs, Federal standards and reclamation requirements should be established.

On the basis of discussions with an official of the U.S. Geological Survey, 39 States have implemented programs for the reclamation of mined lands. Although many States have enacted reclamation programs, we found that implementation and enforcement of the laws have been slow, coverage is often incomplete, and the degree of enforcement varies widely. For example, in Minnesota, although a reclamation act was enacted in 1969, rules and regulations to implement the act have not been formulated. According to State officials, in April 1976 the State legislature finally made funds available for formulating rules and regulations--about 7 years after the passage of the act.

With regard to the extent of coverage, we noted that in Florida, Michigan, Minnesota, and Wisconsin, State reclamation programs did not cover all minerals being mined. In Florida, for example, the State requires reclamation only of lands for which severance taxes on minerals being mined are imposed on the mine operators. As a result, most sand, gravel, clay, and limestone operations within the State are not covered. On a nationwide basis, of 39 State reclamation programs, only about 24 cover all minerals mined in the States.

#### NEED FOR FEDERAL EFFORTS

On the basis of the information obtained during our survey and our past experience with the development of State programs for reclamation, we believe that many States are awaiting Federal leadership. In Minnesota, for example, a report prepared in 1972 for the Minnesota Department of Natural Resources stated that:

"The mining industry is not likely to participate in a large scale reclamation effort until forced to do so by law. Federal and State participation in the development of regulatory controls has been handicapped by lack of statutory authority."

The report concluded that, unfortunately, the climate does not exist for a strong stance by the State to improve the adverse environmental effects of present and future mining.

The lack of requirements for protection and rehabilitation of Federal lands mined for minerals under the 1872 Mining Law has been of concern to us for some time. The 1872 Mining Law presently governs conditions for exploring and developing hardrock minerals on Federal lands. We reported in our July 25, 1974, report entitled "Modernization of 1872 Mining Law Needed to Encourage Domestic Mineral Production, Protect the Environment, and Improve Public Land Management" (B-118678), that the lack of environmental safeguards for mineral exploration and development activities under the 1872 Mining Law had resulted in scarred landscapes with potentially hazardous pits and unsightly waste material dumps.

We recommended in the report that, among other things, requirements be established for the submission of a plan detailing the nature of exploration activities and the measures which would be taken to minimize environmental damage and reclaim the lands. We also recommended that a leasing system for regulating the extraction of hardrock minerals from public lands be established and that leases under the system contain provisions for protecting and rehabilitating public lands.

In an effort to prevent environmental damage through control of mineral exploration and development activities, the U.S. Forest Service in August 1974, after the release of our report, issued regulations requiring that a notice of intention to operate be filed for any operation which might disturb surface resources. It required that, for operations deemed likely to cause significant disturbance, a plan of operations detailing measures to be taken to prevent environmental damage be submitted. In December 1976, the Bureau of Land Management proposed regulations similar to those of the Forest Service for public domain lands. Legislation establishing a leasing system for minerals mined under the 1872 Mining Law has not been enacted, although legislation was introduced in previous sessions, as well as in the current session of the Congress, such as in House bill 5806.

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On the basis of our recent survey efforts, we believe that effective reclamation programs should be established for the protection and reclamation of all lands. While we feel that further study and analysis may be needed to assess the need

