

Statistical Data on the Availability of Federal Onshore Land for Mineral Activity in 1975

A. Introduction

One of the most significant and visible constraints on mineral activity on onshore Federal land has been the removal by statute or administrative action of substantial tracts of that land from availability under the Federal mineral disposal laws.

Existing agency records make it very difficult to obtain an overall picture of the amount of acreage that has been removed from availability for mineral activity. The primary source of data on Federal land management is the annual Public Land Statistics published by the U.S. Bureau of Land Management (BLM). This BLM document, however, does not contain cumulative figures on mineral land availability. It lists only the gross acreage of withdrawal and revocation actions during the fiscal year and does not indicate what sorts of activities, if any, have been precluded on the withdrawn land. (Withdrawals are used to transfer jurisdiction over Federal land from one agency to another as well as to preclude certain activities such as location of mining claims or issuance of mineral leases.) It also does not indicate whether the withdrawals and revocations overlap other existing withdrawals.

The information necessary to produce an accurate aggregate analysis exists only in raw form in local agency land records, and neither BLM nor any other agency has any program or procedures for gathering, compiling, and analyzing such information, which would seem to be indispensable for comprehensive minerals and land management.

At the present time, therefore, any attempt to construct an overall picture of Federal mineral land availability must rely on whatever data is available or can be constructed from secondary sources. For example, the statistical data in this appendix were obtained by: analyzing gross acreages reported for various Federal agencies in BLM's Public Land Statistics and internal agency documents (the sources usually conflict); identifying relevant statutes and regulations and analyzing their effect on agency land; searching for data on acreages affected by each statute in Public Land Statistics, hearings or any other source that came to light; and tracking down agency personnel who could provide rough estimates of acreages in various land categories.

Although every effort was made to obtain the most accurate information available and to account for overlaps, the final data reported in this appendix were often based on rough estimates and assumptions. These estimates and assumptions are explained

and the sources for all data are cited in order to facilitate comparison with other recent surveys of Federal mineral land availability.¹

Finally, it should be noted that the figures reported are only approximate and do not capture the finer details of mineral land availability. For example, some of the acreage listed as unavailable in 1975 was actually dotted or perhaps even blanketed with outstanding mineral leases or mining claims that predated the removal of the land from availability for mineral activity. As of June 30, 1974, mineral leases and prospecting permits covered 82.6 million acres of public domain² and 8.4 million acres of acquired land,³ or a total of 91 million acres of onshore Federal land. Only very rough estimates were possible of the acreage covered by outstanding mining claims in 1975, since there was no requirement that such claims be reported to the Federal Government.⁴ Assuming 3 million nonoverlapping claims in 1975,⁵ all covering the maximum allowable acreage (about 20 acres for both lode and placer claims), approximately 60 million acres were covered by mining claims in 1975. These claims, if valid on the date the land was removed from availability for further acquisition of mineral rights, can continue to be developed. The same is true for the mineral leases and prospecting permits.

Conversely, some of the land listed as available with moderate or slight restrictions for mineral activity in 1975 was closed or highly restricted for development of some or all minerals as a result of published policies or ad hoc decisions by local land management officials to reject lease applications or discourage mining claimants in certain areas.⁶ Although the data in this appendix account for formal and informal land management policies and actions that are applied fairly uniformly throughout the Nation to a discrete category of land (for example BLM natural areas), no attempt was made to account for the numerous local policies and decisions applied to areas of land not identified with any discrete national category.

The data in this appendix, insofar as possible and unless otherwise noted, reflect land status during 1975. The compilation of the data was undertaken in 1975 and early 1976 as one of the first tasks of this assessment. There has been no attempt to update the appendix by keeping track of changes since then.

B. Authority for and Methods of Removing Federal Onshore Land From Availability for Mineral Activity

Federal onshore land has been made unavailable for mineral activity through statute, formal withdrawal orders by the Executive, administrative land classification

¹Bennethum and Lee, "Is Our Account Overdrawn?" *Mining Congress J.*, September 1975, at 33-48 (hereinafter cited as Bennethum and Lee); U.S. Department of the Interior, *Mining and Minerals Policy*, 1976, at 81-93 (1976).

²U.S. Bureau of Land Management, *Public Land Statistics*, 1975, tables 72 and 78 (1976) (hereinafter cited as *Public Land Statistics*).

³*Ibid.*, table 77.

⁴Annual reporting, beginning in 1979 for claims located prior to Oct. 21, 1976, is now required by sec. 314 of the Federal Land Policy and Management Act of 1976, 90 Stat. 2769, 43 U.S.C.A. §

1744 (Supp. 1977).

⁵The Public Land Law Review Commission estimated that there were 5.5 million mining claims as of 1970. Public Land Law Review Commission, *One Third of the Nation's Land* 130 (1970). A more recent estimate placed the total at over 10 million. Bennethum and Lee, note 1, at 35, figures 1 and 2.

⁶For example, the policy decision not to lease certain coal beds in BLM's Buffalo Creek Planning Unit in Montana, adopted as part of the land management plan for the unit and published in U.S. Bureau of Land Management, Billings District Office, *Buffalo Creek Unit, Land Use Decisions*, June 30, 1973, at 1-3 (1973).

actions or State or private applications that result in segregation or withdrawal under a particular public land law, or the exercise of administrative discretion in implementing the Federal mineral laws.

Congress has not provided for development of some minerals on certain categories of land (for example, hardrock minerals on most acquired land that is not under the jurisdiction of the Forest Service) and has affirmatively acted to exclude certain other categories of land (for example, national parks, townsites, the National Petroleum Reserve in Alaska, and, in 1984, wilderness areas) and even entire States (for example, Alabama, Michigan, Oklahoma, and Wisconsin) from the operation of one or more of the Federal mineral laws.

Congress has also delegated to the executive branch the authority to withdraw land from mineral activity for specified purposes (for example, reclamation projects, national monuments, and wildlife refuges in national forests), or “temporarily” (until revoked by the Executive or Congress) for any public purpose. The latter general grant of authority was made in the Pickett Act of 1910, which, however, did not authorize the withdrawal of land from exploration for and development of the metalliferous hard-rock minerals,^z

Since at least the middle of the 19th century, the Executive has asserted an implied authority to withdraw land from all mineral activity. The authority was initially used to establish lighthouses, military posts, and Indian reservations. But it has since been utilized to accomplish withdrawals for almost every sort of land use. The exercise of the authority was upheld by the Supreme Court in 1915 in the famous *Midwest Oil* case, based on an implied acquiescence by Congress in the long-continued exercise of the authority.⁸

President Taft, uncertain of the validity of the implied authority, had requested Congress in 1909 to provide statutory authority for temporary withdrawals. The result was the Pickett Act of 1910, discussed above. Ever since the Act’s passage, there has been a debate concerning whether it was meant to abolish or limit the President’s implied withdrawal authority. In 1941, after a flurry of correspondence between the Secretary of the Interior and the Attorney General, the latter issued an opinion stating that the Pickett Act did not affect the Executive’s implied authority to make permanent withdrawals from all forms of mineral activity.⁹ However, the debate continued. In 1958, Congress passed the Engle Act to limit the exercise of the implied authority with respect to withdrawals for defense purposes; after 1958, any new withdrawal for defense purposes (rather than for civil projects) of more than 5,000 acres in the aggregate for any one project could be made only by an act of Congress.¹⁰

The implied power was exercised so often in the period between 1910 and 1976 that, had a case arisen challenging its validity, it doubtless would have been sustained on the ground that Congress again had implicitly acquiesced in its exercise. Moreover, in 1971 Congress explicitly directed the Secretary of the Interior to use the President’s

^z 43 U.S.C. §§ 141, 142 (1970), repealed by Federal Land Management and Policy Act of 1976, § 704(a), 90 Stat. 2792 (1976).

⁸ *United States v. Midwest Oil Co.*, 236 U.S. 459 (1915).

⁹ 40 Op. Att’y Gen. 71 (1941). For a complete exposition of the history of the implied withdrawal authority, see Wheatley, *Study*

of Withdrawals and Reservations of Public Domain Lands (1969), a study done for the Public Land Law Review Commission (hereinafter *PLRLC Withdrawals Study*).

¹⁰ 43 U.S.C. § 156 (1970).

implied authority to withdraw certain land under the Alaska Native Claims Settlement Act (ANCSA).¹¹

Congressional acquiescence ended, however, in 1976 when Congress expressly repealed the President's implied authority insofar as it was based on congressional acquiescence.¹² Congress also repealed the President's more limited explicit authorization under the Pickett Act.¹³ Both were replaced with an express grant of authority to the Secretary of the Interior to make temporary, but renewable, withdrawals affecting all minerals.¹⁴

Land is also made unavailable for mineral activity by the segregative effect of applications for withdrawal, State or private land selections, agency classifications, and private entries or applications under applicable public land laws. The land applied for is segregated from mineral activity (pending final action on the application, but for no longer than 2 years if the application is for a withdrawal)]' to the extent that the proposed withdrawal, entry, or other action would preclude such activity.

In addition to formal withdrawals and segregations, various informal land management controls are used to restrict access to minerals on Federal land. Mineral leasing is a discretionary activity—the Department of the Interior can simply refuse to lease any or all mineral land. Furthermore, for acquired land, Interior must obtain the consent of the land management agency (for example, the U.S. Forest Service) prior to issuing a mineral lease.¹⁶ Even on public domain land, Interior will not usually lease land under the jurisdiction of another agency if the other agency objects, even though consent is not required.

Mining locations, unlike mineral leasing, are a statutory right on any public domain (but not acquired) land not formally withdrawn or segregated from mineral development. However, although the right to locate claims cannot be denied, access can be restricted through regulation of mining activities to protect surface resources, including specification of the mode and route of access (for example, by helicopter), and through delays or refusals to grant permits for powerlines, processing plants, and other mining-related facilities.

Decisions not to lease certain minerals in certain areas or to impose specific restrictions on mining or mining-related activities are sometimes published in general form in regulations, land use plans, or agency manuals. Just as often, however, the decision is neither generalized nor published, but rather made in an ad hoc fashion, effectively insulated from outside review.

¹¹43 U.S.C. § 1616(c) and (d) (Supp. V 1975); S. Rep. 92-581, 92d Cong., 1st sess. 44 (1971) [conference report].

¹²Federal Land Policy and Management Act of 1976, § 704(a), 90 Stat. 2792 (1976). The President may still possess an inherent constitutional withdrawal power. See generally *PLLHC Withdrawals Study*, note 9.

¹³Federal Land Policy and Management Act of 1976, § 704(a), 90 Stat. 2792 (1976).

¹⁴*Ibid.*, § 204, 43 U.S.C.A. § 1714 (Supp. 1977).

¹⁵*Ibid.*

¹⁶30 U.S.C. § 352 (1970); Reorganization Plan No. 3 of 1946, § 402, 60 Stat. 1099 (1946).

C. Tabular Summary by Land Use Category of the Availability of Federal Onshore Land

The three tables in this section summarize the data developed and discussed in the following sections on the availability for mineral activity of various categories of Federal onshore land in 1975.

All relevant Federal onshore land is included in each table. There were 703.8 million acres of public domain land and 56.7 million acres of acquired land owned by the Federal Government in 1975.¹⁸ The Government also had reserved ownership of all minerals in 39.4 million acres and of certain of the fuel and fertilizer minerals in another 23.9 million acres of public domain that had been conveyed to private parties as of 1975.¹⁹ Altogether, then, the Government controlled access²⁰ to all the minerals in 799.9 million acres (743.2 million public domain, 56.7 million acquired) and to all or some of the fossil fuel and fertilizer minerals in 823.8 million acres (767.1 public domain, 56.7 million acquired.)

Table B.1 covers the 823.8 million acres of Federal onshore land for which the Government controlled access to all or some of the nonmetallic fuel and fertilizer minerals (coal, oil, gas, oil shale, native asphalt and bitumen, geothermal, phosphate, and potash) plus sodium and (in Louisiana and New Mexico only) sulfur,

Table B.2 covers the 799.9 million acres of Federal onshore land for which the Government controlled access to the “hardrock” or “locatable” minerals (all minerals other than the nonmetallic fuel and fertilizer minerals, sodium, sulfur if in Louisiana or New Mexico, and common varieties of sand, stone, gravel, pumice, pumicite, and cinders).

Table B.3 is similar to table B.2. The only difference is that table B.3 covers hardrock mineral activity on the 743,2 million acres of public domain only, while table B.2 covers hardrock mineral activity on public domain and acquired land. Table B.3 is included to facilitate comparison of the data in this appendix with data compiled by other recent surveys of Federal mineral land availability,²¹ which limited themselves to public domain insofar as hardrock minerals were concerned.

Each of the three tables classifies land as either formally closed to mineral activity, highly restricted, or subject to moderate or slight restriction. The “formally closed” classification includes land explicitly closed to mineral activity by statute (for example, National Petroleum Reserve No. 4 and almost all national parks in 1975) or by a published land order (for example, wildlife, military, or oil shale land). The “highly restricted” classification includes land which, while formally open to mineral activity, is restricted by statutory conditions (for example, powersites), statutory and ad-

¹⁸ Indian land is not included as Federal land in this report. Certain Federal land administered by the Bureau of Indian Affairs for particular Native uses is included. See sec. E.

¹⁹ *Public Land Statistics*, table 7. The Government does not own some or any of the minerals in at least 10 million acres of its acquired land. See U.S. Forest Service, *Mineral Area Management on National Forest System Lands* 25 (1974). Nevertheless, the 10

million acres have been kept in the tabulation since the Government controls the surface and can greatly affect access to the non-Federal minerals.

²⁰ *Public Land Statistics*, table 17.

²¹ See note 18.

²² See the surveys cited in note 1.

Table B.1.—Availability of Federal Onshore Land for Development of Fossil Fuel and Fertilizer Minerals
Status in 1975*
(Millions of acres)

Designated use	Formally closed	Highly restricted	Moderate or slight restriction
Military	22.9 (2.80/-)	—	—
Indian (nonreservation)	0.9 (0.1 %/0)	—	—
National parks, etc.	24.6 (3.0%/0)	—	—
National recreation areas	1.4 (0.2%/0)	0.2 (0.0%/0)	0.4 (0.0%/0)
Historic and archeologic	7	?	—
Fish and wildlife	1.9 (0.2%)	29.4 (3.6%)	—
Endangered species	7	?	—
National forest wilderness	—	11.6 (1.4%)	—
National forest wilderness study	—	15.2 (1.8%)	—
National forest roadless	—	—	42.5 (5.2%/4)
BLM roadless	0.1 (0.0%/0)	2.0 (0.2%/0)	22.8 (2.80A)
Wild and scenic rivers	0.1 (0.0%/0)	0.9 (0.1%/0)	—
Irrigation projects	—	7.6 (0.90/0)	—
Stockraising and agricultural	—	—	65.8 (8.0%/0)
Water supply and control	7.8 (0.9%)	1.5 (0.2%)	—
Powersites	—	15.2 ^a (1.8%)	—
Pipeline corridors	5.3 (0.6%)	—	—
ERDA and TVA	2.1 (0.3%)	0.9 (0.1%)	—
Petroleum and oil shale reserves	23.9 (2.9%)	3.7 (0.5%)	0.1 (0.0%/0)
Geothermal	—	1.1 (0.1%)	—
Surface occupancy	5.4 (0.7%)	0.5 (0.1%)	—
Statewide withdrawals	—	—	1.0 (0.1%/0)
Forest Service general	—	—	104.6 (12.7%)
BLM general	—	0.6 (0.1%)	136.9 (16.6%/0)
Subtotal non-ANCSA	96.4 (11.7%)	81.4 (9.9%)	374.1 (45.4 %/0)
Alaska Native selections	49.2 (6.0%)	—	30.8 (3.7%/0)
Alaska State selections	39.1 (4.7%)	—	16.4 (2.0%/0)
ANCSA d-1	71.4 (8.7%)	—	—
ANCSA d-2	65.0 (7.9%)	—	—
Subtotal ANCSA	224.7 (27.3%)	—	47.2 (5.7%)
Total,	321.1 (39.0%)	81.4 (9.9%)	421.3 (51.1 %/0)

*The Alaska situation was changed in late 1978 by major new executive withdrawals that resulted in no increase (over prior ANCSA withdrawals noted in this table) in the land formally closed to development of the fossil fuel and fertilizer minerals. See section O of this appendix.
^a 0 overlaps stricter ANCSA withdrawals and is not included in totals.

ministrative conditions (for example, wilderness areas or certain reclamation projects), or administrative conditions (for example, BLM's primitive and natural areas) to such an extent that mineral activity is greatly discouraged, although it sometimes does occur. The "moderate or slight restriction" classification includes all other Federal onshore land, which is generally open to mineral activity, although there will usually be some requirement to mitigate the mineral activity's impact on the surface resources of the land, or the land may be closed with respect to a few minerals (for example, land open to location of metalliferous minerals only is classified as being moderately restricted for hardrock mineral activity),

Table 6.2. —Availability of Federal Onshore Land for Development of Hardrock Minerals

Designated use	Status in 1975*		
	(Millions of acres)		
	Formally closed	Highly restricted	Moderate or Slight restriction
Military	22.9 (2.9%)	—	
Indian (nonreservation)	0.9 (0.1%)	—	
National parks, etc	17.5 (2.2%)	7.1 (0.9%)	
National recreation areas	1.4 (0.2%)	0.2 (0.0%)	0.4 (0.0%)
Historic and archeologic	?	?	
Fish and wildlife	30.0 (3.8%)	1.3 (0.2%)	
Endangered species	?	?	
National forest wilderness		11.6 (1.5%)	
National forest wilderness study	—	15.2 (1.9%)	
National forest roadless		—	425 (5.3%)
BLM roadless	0.1 (0.0%)	2.0 (0.2%)	228 (2.9%)
Wild and scenic rivers	0.9 (0.1%)	0.1 (0.0%)	
Irrigation projects.	4.9 (0.6%)	2.7 (0.3%)	
Stock raising and agricultural	—	—	41.9 (5.2%)
Water supply and control	7.8 (1.0%)	1.5 (0.2%)	—
Powersites	—	15.2 ^a (1.9%)	
Pipeline corridors	2.9 (0.4%)		24 (0.3%)
ERDA and TVA	3.0 (0.4%)		
Petroleum and oil shale reserves	27.4 (3.4%)		0.3 (0.0%)
Geothermal	1.1 (0.1%)	—	—
Surface occupancy	5.4 (0.7%)	0.5 (0.1%)	
Statewide withdrawals.	0.4 (0.0%)		0.6 (0.1%)
Forest Service general.			1046 (13.1%)
BLM general	0.6 (0.1%)		136.9 (17.1%)
Subtotal non-ANCSA	127.2 (15.9%)	48.4 (6.1%)	3524 (44.0%)
Alaska Native selections	49.2 (6.2%)		30.8 (3.9%)
Alaska State selections	—		55.5 (6.9%)
ANCSA d-1	30.0 (3.7%)		41.4 (5.2%)
ANCSA d-2	65.0 (8.1%)		
Subtotal ANCSA	144.2 (18.0%)		1277 (16.0%)
Total	271.4 (33.9%)	484 (6.1%)	4801 (60.0%)

*The Alaska situation was changed in late 1978 by major new executive withdrawals that, according to rough estimates provided to OTA by the BLM's Alaska Native Claims Office, resulted in a net increase (over prior ANCSA withdrawals noted in this table) of approximately 13 million acres (1.6%) in the land formally closed to hardrock mineral activity. See section O of this appendix.

^a9.0 overlaps stricter ANCSA withdrawals and is not included in totals.

D. Military

All lands withdrawn or reserved for the military, except naval petroleum, oil shale, or coal reserves, are subject to the operation of "the applicable public land mining and mineral leasing laws," except "where the Secretary of Defense, after consultation with the Secretary of the Interior, determines that such disposition or exploration is inconsistent with the military use of the lands so withdrawn or reserved."²² However, the applicable public land mineral leasing laws in 1975 excluded from their coverage any acquired lands set apart for military or naval purposes, as well as the

²²43 U.S.C. § 158 (1970).

Table B.3.—Availability of Federal Public Domain for Development of Hardrock Minerals
 Status in 1975^a
 (Millions of acres)

Designated use	Formally closed	Highly restricted	Moderate or slight restriction
Military	16.3(2.2%)		—
Indian (nonreservation)	0.1(0.0%)		—
National parks, etc.	12.5(1.7%)	7.1(1.0%)	—
National recreation areas	1.4(0.2%)	0.2(0.0%)	0.4(0.1%)
Historic and archeologic			—
Fish and wildlife	26.1(3.5%)	1.3(0.2%)	—
E n d a n g e r e d s p e c i e s			—
National forest wilderness	—	11.4(1.5%)	—
National forest wilderness study	—	15.1(2.0%)	—
National forest roadless	—		42.5(5.7%)
BLM roadless	0.1(0.0%)	2.0(0.3%)	22.8(3.1%)
Wild and scenic rivers	0.9(0.1%)	0.1(0.0%)	—
Irrigation projects	3.0(0.4%)	2.7(0.4%)	—
Stockraising and agricultural	—	—	41.9(5.6%)
Water supply and control	0.7(0.1%)	1.5(0.2%)	—
Powersites	—	15.2a(2.0%)	—
Pipeline corridors	2.9(0.4%)		2.4(0.3%)
ERDA and 1 VA	1.4(0.2%)	—	—
Petroleum and oil shale reserves	27.4(3.7%)		0.3(0.0%)
Geothermal	1.1(0.1%)		—
Surface occupancy	4.9(0.7%)	0.5(0.1%)	—
Statewide withdrawals	0.4(0.0%)		0.6(0.1%)
Forest Service general	—		77.9(10.5%)
BLM general	0.6(0.1%)	—	134.6(18.1%)
Subtotal non-ANCSA	99.8(13.4%)	48.1(6.5%)	323.4(43.5%)
Alaska Native selections	49.2(6.6%)		30.8(4.1%)
Alaska State selections	—		55.5(7.5%)
ANCSA d-1	30.0(4.0%)		41.4(5.6%)
ANCSA d-2	65.0(8.8%)		—
Subtotal ANCSA	144.2(19.4%)		127.7(17.2%)
Total	244.0 (32.8%)	48.1(6.5%)	451.1(60.77%)

^aThe Alaska situation was changed in late 1978 by major new executive withdrawals that, according to rough estimates provided to OTA by the BLM's Alaska Native Claims Office, resulted in a net increase (over prior ANCSA withdrawals noted in this table) of approximately 13 million acres (1.7%) in the amount of public domain formally closed to hardrock activity. See section O of this appendix.

^a9.0 overlaps stricter ANCSA withdrawals and is not included in totals.

naval petroleum and oil shale reserves.²³ Moreover, the Secretary of Defense has generally determined that land withdrawn for strictly military purposes should be closed to mineral exploration and development for safety and security reasons.

Excluding the naval petroleum and oil shale reserves, there were 16.3 million acres of public domain and 6.6 million acres of acquired land withdrawn for strictly military purposes as of June 30, 1974.²⁴ All of this land is listed in the tables in section C as having been closed to mineral activity in 1975.

²³30 U.S.C. §§ 181, 352 (1970). Sec. 12(a) of the Federal Coal Leasing Amendments Act of 1976, Public Law 94-377, 90 Stat. 1083 (1976), eliminated the restriction against mineral leasing on acquired land set apart for military or naval purposes. However,

leasing of coal on such land is apparently restricted by sec. 12(b) of the Act to governmental utilities located in the State containing the land.

²⁴Public Land Statistics, table 9.

Land withdrawn for water resource development projects of the Army Corps of Engineers is discussed in subsection I(3). The naval petroleum and oil shale reserves are discussed in subsection K(1)(a).

E. Indian (Nonreservation)

This category includes only Federal land withdrawn for special Native American uses (reindeer stations, school sites, fishing areas, livestock reserves, and so forth). It does not include tribal or individual Native land. Nor does it include Federal land in Alaska currently being transferred to Alaska Natives, which is discussed in subsection O(1).

BLM listed 5 million acres withdrawn for Native uses as of June 30, 1974.²⁵ However, the withdrawals for 4.1 million of these acres in Alaska were revoked by subsection 19(a) of the Alaska Native Claims Settlement Act.²⁶ The remaining 0.9 million acres were in the lower 48 States (0.1 million acres of public domain and 0.8 million acres of acquired land)²⁷ and are listed in the tables in section C as having been closed to mineral activity in 1975,

F. National Parks, Monuments, Recreation Areas, and Historic Sites

1. National Parks, Monuments, and Historic Sites

National parks have always been established by express congressional designation, while national monuments and historic sites have been established either by statute or by executive action pursuant to authority granted in the Antiquities Act of 1906.²⁸ All parks, monuments, and historic sites are under the jurisdiction of the National Park Service.

National parks and monuments are statutorily excluded from the operation of the Mineral Leasing Acts.²⁹ It has been held that national monuments designated by the President pursuant to the Antiquities Act are also closed to location under the Mining Law.³⁰ All but five of the congressionally designated national parks and monuments were closed by statute to locations under the Mining Law in 1975. All national historic sites have been closed to mineral activity.

The five national parks and monuments open to locations under the Mining Law in 1975 were Coronado National Memorial, Death Valley National Monument, Glacier Bay National Monument, Mount McKinley National Park, and Organ Pipe Cactus Na-

²⁵Ibid.

²⁶43 U.S.C. § 1618(a) (Supp. V 1975). See subsec. O(1) of this appendix.

²⁷Public Land Statistics, table 9.

²⁸16 U.S.C. § 431 (1970).

²⁹30 U.S.C. §§ 181, 352 (1970).

³⁰*Cameron v. United States*, 252 U.S. 450, 459 (1920).

tional Monument.³¹ In Coronado National Memorial and the Glacier Bay and Organ Pipe Cactus National Monuments, title could be acquired to the mineral deposits only, exclusive of the land containing them. All five of these units were closed by Congress in 1976 to future locations under the Mining Law, and existing mineral rights on patented or unpatented mining claims within any area of the National Park System were made subject to regulations prescribed by the Secretary of the Interior “which he deems necessary or desirable for the preservation and management of those areas.” Prior to the 1976 legislation, mining activities were discouraged by administrative actions by the National Park Service but nonetheless continued at a high level in certain units, for example Death Valley National Monument.

The five units contained a total of 7.1 million acres of Federal public domain land in 1975. The two units in Alaska—Glacier Bay and Mount McKinley—accounted for 4.7 million of these acres. The 7.1 million acres are listed in the tables in section C as having been highly restricted in terms of hardrock mineral activity in 1975. They, like all other acreage in national parks and monuments, were closed to mineral leasing in 1975.

As of June 30, 1974, there were 19.8 million acres of public domain and 5 million acres of acquired land, or a total of 24.8 million acres, under the sole jurisdiction of the National Park Service. “New areas added through December 31, 1975, were in the initial stages of land acquisition and contained only 431 acres of Federal land.” The 19.8 million acres of public domain included 19.6 million acres in national parks, monuments, and historic sites and 0.2 million acres in national recreation areas. The 0.2 million acres in national recreation areas are discussed in subsection 2.

The 19.6 million acres of public domain and 5 million acres of acquired land contained in national parks, monuments, and historic sites in 1975 are listed in the tables in section C as having been closed to mineral leasing and also closed, except for the 7.1 million acres discussed above, to location under the Mining Law in 1975.

2. National Recreation Areas

National recreation areas (NRAs) have been established by both statute and executive action, generally on land previously or concurrently withdrawn for reclamation or other water resource development purposes. The water resource development purpose is given a higher priority than recreational use, which in turn usually has a higher priority than mineral development, except in those areas where the Mining Law remains applicable and mining is therefore a preemptive use. NRAs have been established as units of the National Park System and also within areas of the National Forest System.

In 1975, four of the National Park System NRAs were under the sole jurisdiction of the National Park Service. Of these four units, only one, the Gateway NRA (3,716 acres

³¹16 U.S.C. § 450 v-2 (1970), 16 U.S.C. § 447 (1970), 49 Stat. 1817 (1936), 16 U.S.C. § 350 (1970), and 16 U.S.C. § 450z (1970), respectively.

³²Public Law 94-429, 90 Stat. 1342, 16 U.S.C.A. §§ 1901-1912 (Supp. 1977).

³³U.S. National Park Service, *Index of the National Park System*

and Affiliated Areas as of Jan. 1, 1975 (1975).

³⁴*Public Land Statistics*, table 9.

³⁵U.S. National Park Service, “Summary of Acreages, Dec. 31, 1975” (1976) [Big Cypress and Big Thicket National Preserves and Cuyahoga Valley National Recreation Area].

of acquired land), was closed by statute to mineral development in 1975.³⁶ The Delaware Water Gap NRA (23,050 acres of acquired land) was subject to the operation of the mineral leasing laws,³⁷ and the Lake Chelan and Ross Lake NRAs (166,629 Federal acres, almost all public domain) were subject to leasing of both hardrock and Leasing Act minerals, if the Secretary of the Interior found that mineral development would not have significant adverse effect on the administration of the recreation area. Only the Lake Chelan and Ross Lake NRAs contain significant acreage; their 0.2 million acres of public domain are listed in the tables in section C as having been highly restricted with respect to any sort of mineral activity in 1975, since the National Park Service does not generally favor mineral activity in any of its units.

Nine of the National Park Systems NRAs, totaling 2.9 million Federal acres, were on public domain land withdrawn for reclamation purposes in 1975 and are included in the acreage figures given for reclamation land in subsection 1(1). All of these NRAs were subject to the dominant reclamation use. The Glen Canyon NRA (1.2 million acres), the Whiskeytown Lake unit of the Whiskey town-Shasta-Trinity NRA (42,422 acres), and, by interpretation, the Lake Mead NRA (1.5 million acres) were open by statute to leasing of both hardrock and Leasing Act minerals.³⁹ The other six NRAs were open to mining location and mineral leasing to the extent allowed by the underlying reclamation withdrawal.⁴⁰ Although mineral activity is not common in these nine NRAs, it does occur: three uranium leases were issued in 1975 in the Lake Mead NRA, in tributary side canyons of the Grand Canyon being studied for inclusion in the Grand Canyon National Park and the Wilderness System.⁴¹

The two remaining National Park System NRAs were on land withdrawn for other agencies,⁴² and are included in the acreage figures given for those agencies elsewhere in this appendix,

There were seven NRAs administered by the Forest Service in 1975. The Hells Canyon, Oregon Dunes, and Sawtooth NRAs, totaling around 1.4 million acres of public domain, were closed by statute to any form of mineral activity,⁴³ The Flaming Gorge NRA and the Shasta-Trinity portion of the Whiskey town-Shasta-Trinity NRA, together totaling around 0.4 million acres of public domain, were open by statute to leasing of all minerals, including hardrock minerals, subject to the consent of the Secretary of Agriculture.⁴⁴ According to the Forest Service, mineral activity is permitted in these two NRAs subject to the appropriate lease conditions. In 1975 there were prospecting permits for trona (sodium carbonate) and pending permit applications for phosphate and oil and gas in Flaming Gorge. The remaining two National Forest System NRAs in

³⁶16 U.S.C. § 460bb (Supp. V 1975). Acreage figures for the National Park System NRAs were obtained from U.S. National Park Service, *Index of the National Park System and Affiliated Areas as of Jan. 1, 1975* (1975).

³⁷16 U.S.C. §§ 460 o-3 and o-4 (1970).

³⁸16 U.S.C. § 90c-1(b) (1970).

³⁹16 U.S.C. §§ 460dd-2, 460q-5, and 460n-3 (1970 and Supp. V 1975), respectively. The Department of the Interior has interpreted the passing reference to "mineral leasing" in the statute establishing the Lake Mead NRA as authorizing leasing of hardrock as well as Leasing Act minerals, despite the absence of any reference to hardrock leasing as is found in the statutes establishing the Glen Canyon, Lake Chelan, Ross Lake, and Whiskeytown-Shasta-Trinity NRAs. The regulations authorizing hardrock leasing refer only to the Lake Mead and Whiskeytown-Shasta-Trinity

NRAs. 43 CFR § 3500.1-3 (1975).

⁴⁰Arbuckle, Bighorn Canyon (16 U.S.C. § 460t-2 (1970)); Coulee Dam, Curecanti, Lake Meredith, and Shadow Mountain.

⁴¹Sierra Club Legal Defense Fund, Inc., press release, Dec. 9, 1975.

⁴²Golden Gate (Defense Department, 16 U.S.C. § 460cc-2 (Supp. V 1975)) and Amistad (United States Section, International Boundary and Water Commission, United States and Mexico).

⁴³16 U.S.C. §§ 460gg-8, 460z-8, and 460aa-9 (1970 and Supp. V 1975), respectively. Acreages for NRAs other than Hells Canyon are from U.S. Forest Service, "National Forest System, Areas as of June 30, 1974," File 1380 [5400] (1975). Acreage for Hells Canyon estimated by Forest Service personnel early in 1976.

⁴⁴16 U.S.C. §§ 460v-4 and 460q-5 (1970), respectively.

1975 were small units in the Eastern United States which perhaps were open to some mineral activity (the statutes are not clear).⁴⁵

The tables in section C list 1.4 million acres of Forest Service NRAs as having been closed to all mineral activity and 0.4 million acres as having been open subject to moderate or slight restriction in 1975. All of the acreage was public domain.

Other recreational areas have been developed in conjunction with water resource development projects of the Army Corps of Engineers. These areas are included in the acreage figures given in subsection I(3).

3. Historic and Archeological Sites and Objects

In addition to the national historic sites included in the National Park System discussed in subsection 1, there are many historic or archeological sites, buildings, or objects on or adjacent to Federal land that are protected by various Federal laws.

The Antiquities Act of 1906 makes it a crime to “appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity, ” situated on Federal land without the permission of the Secretary of the department that has jurisdiction over such land, and the Act further provides that permission may only be granted for examinations, excavations, and gatherings undertaken for the benefit of recognized scientific or educational institutions. ⁴⁶ This Act, if strictly enforced, would apparently prohibit mineral development in any area of Federal land containing historic sites or objects of antiquity, at least prior to removal and preservation of the objects in public museums (‘removal’ of sites is another matter). ⁴⁷

Other historic preservation statutes and executive orders, which apply to any Federal or federally licensed or assisted project, activity, or program on or off Federal land, require historic and archeological surveys prior to commencement of such projects, activities, or programs, consideration of effects on significant historic and archeological properties, and, when feasible, salvage of historic and archeological objects and data.⁴⁸

The acreage impacted by these statutes, especially the Antiquities Act of 1906, could be quite large, but no acreage estimate has been attempted.

G. Protection of Fish and Wildlife

1. The National Wildlife Refuge System

Several statutes authorize establishment of particular refuges. In 1934, Congress gave the President general authority to establish refuges within national forests, with

⁴⁵Spruce Knob-Seneca Rocks and Mount Rogers NRAs, 16 U.S.C. §§ 460p-4 and 460r-4 (1970), respectively.

⁴⁶16 U.S.C. §§ 432 and 433 (1970).

⁴⁷Ibid.

⁴⁸Historic Sites Act of 1935, 16 U.S.C. §§ 461-467 (1970); Historical and Archeological Data Preservation Act of 1960, 16 U.S.C. §§

469-469c (1970), as amended by Public Law 93-291 (1974); National Historic Preservation Act of 1966, 16 U.S.C. §§ 470-470n (1970); National Environmental Policy Act of 1969, 42 U.S.C. §§ 433 l(b)(4), 4332 and 4335 (1970); Public Law 94-429, § 9.90 Stat. 1343, 16 (J. S.C.A. § 1908 (Supp. 1977)); Exec. Order 11593, 36 F.R. 8921 (1971), 16 U.S.C. § 470 note (Supp. V 1975).

uses other than for fish and wildlife purposes being permitted “so far as such uses may be consistent with the (fish and wildlife) purposes . . .”⁴⁹ Most refuges, however, have been established by executive action dating as far back as the 19th century, almost always relying on the President’s implied authority. In 1966, Congress enacted the National Wildlife Refuge System Administration Act of 1966 to give formal recognition to the system and consolidate the authorities relating to the various refuges, reserves, and game ranges.⁵⁰ The Act states that “the United States mining and mineral leasing laws shall continue to apply to any lands within the System to the same extent they apply prior to October 15, 1966, unless subsequently withdrawn under other authority of law.”

As of June 30, 1974, there were 26.9 million acres of public domain and 3.9 million acres of acquired land, or a total of 30.8 million acres, under the primary jurisdiction of the Fish and Wildlife Service included in the National Wildlife Refuge System,⁵¹ Close to 2 million acres of additional land in the system were primarily under the control of some other Federal agency⁵² and are included in the acreage figures given for those agencies elsewhere in this appendix,

Few refuges were left open to the Mining Law upon their establishment. Only two units of the system, the Clarence Rhode Wildlife Range (2.9 million acres) and the Cape Newenham Refuge (0.3 million acres), both in Alaska, were open in 1975 to locations under the Mining Law, and even these two units were only partially open: 1.7 million acres in Clarence Rhode and 0.2 million acres in Cape Newenham had been withdrawn for Native selections under the Alaska Native Claims Settlement Act of 1971. Five other wildlife and game ranges, although not finally withdrawn in 1975, were segregated from mining by proposed withdrawals: the Charles Russell, Kofa, Cabeza Prieta, Charles Sheldon, and Desert ranges.⁵³

In sum, only 1.3 million acres (all public domain in Alaska) were open to locations under the Mining Law in 1975. These 1.3 million acres of public domain are listed in the tables in section C as having been highly restricted with respect to hardrock mineral activity. The remaining National Wildlife Refuge System acreage was closed to such activity in 1975. Thus, 25.6 million acres of public domain and 3.9 million acres of acquired land in the system in 1975 are listed in the tables in section C as having been closed to hardrock mineral activity.

The regulations of the Fish and Wildlife Services’ prohibit prospecting or removing minerals from any unit of the National Wildlife Refuge System, except as authorized by BLM’s leasing regulations. The BLM regulations prohibit oil and gas leasing on wildlife refuge lands, except as necessary to prevent drainage of the Federal deposits because of production on adjacent lands. Oil and gas leasing is also allowed under the BLM regulations on game ranges, Alaska wildlife areas, and wildlife coordination lands made available to the States, but only to the extent permitted by agreements

⁴⁹16 U.S.C. § 694 (1970).

⁵⁰16 U.S.C. § 668dd (1970).

⁵¹*Public Land Statistics*, table 9.

⁵²U.S. Fish and Wildlife Service, *Annual Report of Lands Under Control of the U.S. Fish and Wildlife Service as of June 30, 1975* (1975). The 2 million acre figure does not include the 2.4 million acres in game ranges jointly administered in 1975 by the Fish and

Wildlife Service and the Bureau of Land Management, which are rather included in the 26.9 million acre figure.

⁵³Bennethum and Lee, note 1, at 44, supplemented by information provided by the U.S. Fish and Wildlife Service. See Solicitor’s Opinion M-36702, 74 I.D. 97, 102 (1967).

⁵⁴50 CFR § 26.29 (1975).

entered into by BLM and the Fish and Wildlife Service.⁵⁵ Leasing of minerals other than oil and gas is permitted subject to such special stipulations as may be suggested by the Fish and Wildlife Service.⁵⁶ BLM will seek the Service's advice prior to issuing any lease and, although not required, will generally follow this advice. The Fish and Wildlife Service's manual states that it is the Service's policy usually to recommend against leasing. " Very few mineral leases exist on units of the National Wildlife Refuge System, the oft-cited exception being the oil and gas leases in the northern half (approximately 0.9 million acres) of the Kenai Moose Range in Alaska.

The 26.9 million acres of public domain, minus 1.9 million acres withdrawn for Alaskan Native selections, and the 3.9 million acres of acquired land in the National Wildlife Refuge System are listed in the tables in section C as having been highly restricted with respect to development of the fuel and fertilizer (Leasing Act) minerals in 1975. The 1.9 million Native selection acres are listed as having been closed.

2. Miscellaneous Wildlife Areas

Numerous withdrawals have been made of wildlife areas that are not included within the National Wildlife Refuge System. These withdrawals are for wildlife management or research areas, desert tortoise and pup fish reserves, and so on. At the end of 1974, this category encompassed close to 0.5 million acres formally withdrawn from mining locations and removed in practice from mineral leasing.⁵⁸ These 0.5 million acres are listed in the tables in section C as having been closed to hardrock mineral activity and highly restricted for development of other minerals in 1975.

3. The Endangered Species Act

Section 7 of the Endangered Species Act of 1973 directs all Federal agencies to "take such action necessary to insure that actions authorized, funded or carried out by them do not jeopardize the continued existence of (species of fish or wildlife in danger of extinction) . . . or result in the destruction or modification of habitat of such species which is determined . . . to be critical (to their survival)."⁵⁹ This section of the Act has already played a significant role in the delay for several years of decisions on whether to issue "preference-right" leases to mine phosphate in the Osceola and Los Padres National Forests. It undoubtedly will impact a much wider class of mineral activities in the future as areas of "critical habitat" are identified. The acreage impact has not been estimated.

⁵⁵43 CFR § 3101.3 (1975).

⁵⁶43 CFR § 3501.3 (1975).

⁵⁷Bennethum and Lee, note 1, at 44.

⁵⁸*Ibid.*, at 43; cf. *FWS Annual Report of Lands*, note 52

⁵⁹16 U.S.C. § 1536 (Supp. V 1975).

H. Other Wild and Natural Areas

1. The National Wilderness Preservation System

a. **Introduction.** The Wilderness Act of 1964⁶⁰ created the National Wilderness Preservation System and designated as the initial components of the system 54 national forest areas previously classified as “wilderness,” “wild,” or “canoe” areas, constituting a total of 9.1 million acres. Subsections 4(b) and 4(c) of the Act require that, except as otherwise specifically provided in the Act, all areas designated as wilderness shall be administered so as to preserve their wilderness character. Roads, installations, and mechanized equipment are prohibited. However, subsection 4(d) of the Act specifically provides that, until midnight December 31, 1983,

the United States mining laws and all laws pertaining to mineral leasing shall, to the same extent as applicable prior to the effective date of this Act, extend to those national forest lands designated by this Act as “wilderness areas”: subject, however, to such reasonable regulations governing ingress and egress as may be prescribed by the Secretary of Agriculture consistent with the use of the land for mineral location and development and exploration, drilling, and production, and use of land for transmission lines, water lines, telephone lines, or facilities necessary in exploring, drilling, producing, mining, and processing operations, including where essential the use of mechanized ground or air equipment and restoration of the surface of the land disturbed in performing prospecting, location, and, in oil and gas leasing, discovery work, exploration, drilling, and production, as soon as they have served their purpose.

Subsection 5(b) provides further that the Secretary of Agriculture shall, “by reasonable regulations consistent with the preservation of the area as wilderness, ” permit ingress and egress to valid mining claims wholly surrounded by wilderness “by means which have been or are being customarily enjoyed with respect to other such areas similarly situated.” Subsection 5(c) requires that owners of completely surrounded private land (including mineral patentees) be given either “such rights as may be necessary to assure adequate access” or Federal land of approximately equal value in exchange for the private land.

No new mining locations may be made or mineral prospecting permits or leases issued after December 31, 1983, in any national forest wilderness.⁶¹ In addition, “subject to valid existing rights,” all mineral patents issued after September 3, 1964, must reserve surface title to the United States. Mineral development can proceed beyond 1983 on any valid mining claim located prior to January 1, 1984. Furthermore, mineral exploration, including prospecting, may continue beyond 1983 in national forest wilderness areas “if such activity is carried on in a manner compatible with the preservation of the wilderness environment.” In fact, the Secretary of the Interior is directed to develop and conduct a program whereby “such areas shall be surveyed on a planned,

⁶⁰ 16 U.S.C. §§ 1131-1136 (1970).

⁶¹ National forest areas added to the wilderness system after 1964 generally are governed by the mining provisions of the 1964 Act. That Act preserved the operation of the mining and mineral leasing laws only in those wilderness areas “designated by this Act,” that is, only in the 9.1 million acres designated in 1964.

Solicitor’s Opinion M-36702, 74 I.D. 97, 98 (1967). However, subsequent acts designating additional areas generally contain some statement to the effect that the newly designated area “shall be subject to the provisions of the Wilderness Act governing areas designated by that Act as wilderness areas.” e.g., 16 U.S.C. § 90e-2(b) (1970).

recurring basis consistent with the concept of wilderness preservation by the Geological Survey and the Bureau of Mines to determine the mineral values, if any, that may be present. ”

In addition to immediately designating certain national forest areas as wilderness, the 1964 Act also directed that within 10 years a review be made of (i) all national forest areas previously classified as “primitive” (including, at the President’s discretion, any contiguous national forest areas of predominantly wilderness value); (ii) all roadless areas of at least 5,000 contiguous acres within the National Park System or the National Wildlife Refuge System; and (iii) all roadless islands within the National Wildlife Refuge System. Recommendations were to be submitted by the President to Congress regarding the suitability of each such area for inclusion within the Wilderness System.

The mining provisions of the Wilderness Act do not apply to wilderness areas designated within units of the National Park System and the National Wildlife Refuge System. These wilderness areas, unless otherwise specified in the statute providing for wilderness designation, are immediately closed to the acquisition of any new mineral development rights upon inclusion in the system. However, the incremental effect on mineral activity should be relatively small, since almost all of the areas proposed for inclusion are already closed to mineral development or are in the process of being closed by mechanisms outside the wilderness review process.

Of potentially greater significance is the failure to include units of the National Park System and, particularly, the National Wildlife Refuge System within the ambit of subsection 4(d)(2) of the Wilderness Act, which permits mineral prospecting and surveys if “carried on in a manner compatible with the preservation of the wilderness environment” and requires that surveys be conducted “on a planned, recurring basis consistent with the concept of wilderness preservation by the Geological Survey and the Bureau of Mines to determine the mineral values, if any, that may be present. ” Although mineral surveys focused solely on wilderness areas might lead to undue emphasis on mineral activity in such areas in comparison with less environmentally critical (but unsurveyed) areas, Congress might want to make some provision for gathering of mineral resource information in areas such as parks and refuges that are (or will be) closed to private mineral activity and often encompass millions of acres apiece.

Wilderness areas are designated only by Congress,

b. **National Forest Wilderness.**⁸² As noted above, Congress in 1964 designated 54 national forest wilderness areas totaling 9.1 million acres of public domain, Congress also mandated the study of and recommendations on 34 national forest primitive areas totaling 5.5 million acres of public domain, with possible expansion to include contiguous areas.

The primitive area evaluation, including contiguous areas, was completed in 1974, and almost all of the study areas were recommended for inclusion in the Wilder-

⁸²Except as otherwise noted, all data on national forest wilderness were obtained from *Oversight on Access to Minerals on Public Lands*, hearings on H.R. 8435 before the Subcomm. on Mines and Mining of the House Comm. on Int. and Ins. Affairs,

Ser. No. 94-41, 94th Cong., 1st sess. 72-88 (1976) (hereinafter *Access Hearings*) and from additional information supplied by the Division of Recreation, U.S. Forest Service, in 1976.

ness System. These recommendations, together with proposals for other areas such as those included in Public Law 93-622, the “Eastern Wilderness Act,” had resulted by February 1976 in the addition of 2.7 million acres of public domain and 0.2 million acres of acquired land in the national forests to the Wilderness System. Recommendations for designation of another 3.8 million acres of public domain in completed study areas were pending. None of the designated or recommended acreage was in Alaska.

In addition, pursuant to its basic statutory authority and responsibilities, the Forest Service initiated an inventory of all other national forest “roadless and undeveloped” areas of 5,000 or more contiguous acres. From an initial list of 1,449 areas totaling 55.9 million acres, 274 areas totaling 12.3 million acres were selected in 1973 for study as potential wilderness areas. As of February 1976, 40 of these selected areas had been disposed of: 30 were contiguous to primitive areas and were included in the primitive area evaluation; 6 more were included in the proposal for an Alpine Lakes Wilderness Area in Washington; 1 was designated as wilderness by the Hells Canyon National Recreation Area Act; 2 were designated as wilderness by the Eastern Wilderness Act; and 1 was eliminated as a study area by the Eastern Wilderness Act. The remaining 234 areas totaled approximately 11 million acres of public domain land, including 2.6 million acres in Alaska.

In conjunction with a suit brought by the Sierra Club in 1972 seeking selection of additional roadless areas for study, the Forest Service adopted a policy of managing the 1,175 unselected roadless areas (constituting some 43.6 million acres) to preserve their wilderness characteristics pending completion of land use plans encompassing the various areas. The environmental impact statement accompanying each land use plan must consider the wilderness alternative for any included unselected roadless areas. Prior to completion of a land use plan covering such unselected areas, surface occupancy that is not a matter of statutory right, or extensive surface disturbance associated with the exercise of a statutory right (for example, construction of access roads to mining claims or commencement of surface mining operations),¹¹ will not be permitted without completion of an environmental impact statement. As land use plans are completed, the unselected roadless areas will be either added to the wilderness study category or removed from protected status. As of February 1976, eight previously unselected areas totaling 112,800 acres had been added to the wilderness study category through the land use planning process, leaving around 43.5 million acres, including 18.1 million acres in Alaska, in the unselected roadless category.

Finally, Congress itself had added 17 areas totaling over 0.1 million acres of acquired land and 9 other areas totaling close to 0.9 million acres of public domain to the mandated wilderness study list as of February 1976.

In sum, at the beginning of 1976 there were 11.8 million acres of public domain (including around 0.4 million acres in Hells Canyon and Sawtooth NRAs) and 0.2 million acres of acquired land designated as national forest wilderness (none in Alaska), 3.8 million acres of public domain in wilderness study areas recommended for designation (none in Alaska), 11.9 million acres of public domain (including around 0.6 million acres in Hells Canyon and Sawtooth NRAs) and 0.1 million acres of acquired land in

¹¹Access Hearings, note 62, at 78

other wilderness study areas (including 2.6 million acres of public domain in Alaska), and 43.5 million acres of public domain in unselected roadless areas (including 18.1 million acres in Alaska),

Locations under the Mining Law are permitted until 1984 on all national forest public domain land in the Wilderness System, and mining activities can continue (or be initiated) beyond 1984 on claims validly located prior to 1984. The Wilderness Act subjects mining activities to reasonable regulations consistent with uses of the land necessary for mineral exploration and development, including where essential the use of mechanized ground and air equipment.⁶⁴ The Forest Service's mining regulations require that approval of a plan of operation be obtained before conducting any prospecting or mining activities that will cause significant disturbance of surface resources, and before constructing any roads.⁶⁵ These regulations are applicable to all national forest land but are applied most stringently to wilderness areas and, slightly less stringently, to proposed wilderness areas, study areas, and unselected roadless areas. These regulations supersede earlier, stricter regulations applicable only to wilderness and primitive areas.⁶⁶

The mining industry asserts that the Forest Service mining regulations are so stringently enforced in wilderness and wilderness study areas as to discourage any prospecting or development.⁶⁷ Forest Service records show that as of July 25, 1973, a total of 2,400 new mining claims had been staked since 1964 in the 9.1 million acres originally designated as wilderness, and 200 new claims had been staked in other national forest wilderness areas since their designation.⁶⁸ Many claims have also been staked in primitive and other study areas where there appear to be significant mineral resources." Although there are examples of strictly controlled access, including limiting exploration access to helicopters,⁷⁰ there are also examples of the actual commencement of mining operations with road access and mill sites inside primitive areas.⁷¹ In general, however, as of July 1973, little actual development had occurred in wilderness areas because of stringent operating conditions and strong and vocal public opposition;⁷² only 17 permits had been issued for actual mining.⁷³ In 1975, according to the Forest Service, significant mineral exploration activity was taking place in 7 wilderness areas, no primitive areas, and 54 wilderness study areas.⁷⁴

Although the above figures indicate a substantial amount of mineral activity in wilderness-related areas in the national forests through 1975, the national forest public domain wilderness and wilderness study areas, other than those in the Hells Canyon and Sawtooth NRAs, are listed in the tables in section C as having been highly restricted for hardrock mineral activity in 1975. The Hells Canyon and Sawtooth areas are included in the acreage reported for national forest National Recreation areas in subsection F(2), since both NRAs were closed by statute to mineral activity.

The national forest public domain unselected roadless areas were available for hardrock mineral activity in 1975 subject only to the completion of a land use plan or

⁶⁴See the language quoted in the text following note 60.

⁶⁵36 CFR pt. 252 (1975).

⁶⁶36 CFR §§ 293.13-.15, 293.17 (1974).

⁶⁷*To Amend the Wilderness Act of 1964*, hearing on S.1010 before the Subcomm. on Minerals, Materials, and Fuels and the Subcomm. on Public Lands of the Senate Comm. on Int. & Ins. Affairs, 93d Cong., 1st sess. 112 (1973).

⁶⁸*Ibid.*, at 60.

⁶⁹*Ibid.*, at 78, 83, 84.

⁷⁰*Ibid.*, at 76, 112-113.

⁷¹*Ibid.*, at 75-76, 78-79, 82-83; cf. *ibid.*, at 81-82.

⁷²*Ibid.*, at 17, 21, 23, 61.

⁷³*Ibid.*, at 26.

⁷⁴*Access Hearings*, note 62, at 84.

preparation of an environmental impact statement prior to extensive surface disturbance.⁷⁵ These by now are fairly standard requirements for any area of Federal onshore land, so the national forest public domain unselected roadless areas, except for 1 million acres in Alaska subject to Native selections and hence included in the acreage reported in section O, are listed in the tables in section C as having been open to hard-rock mineral activity with moderate or slight restriction in 1975.

Hardrock minerals on national forest acquired land are leased, as are the fuel and fertilizer minerals on both public domain and acquired land. Mineral leasing on national forest acquired land is subject to the consent of the Secretary of Agriculture. Although the Secretary does not have the same veto power with respect to mineral leasing on public domain land, his recommendations are almost always followed by the Secretary of the Interior. The Forest Service policy in 1975 was either to refuse to allow any mineral leasing within wilderness or wilderness study areas, or to issue leases with “no surface occupancy” stipulations. Mineral leasing on unselected roadless areas was subject to the requirements listed in the previous paragraph for mining locations in such areas. Thus, the national forest wilderness and wilderness study areas, again exclusive of those in the Hells Canyon and Sawtooth NRAs, are listed in the tables in section C as having been highly restricted for development of all minerals on acquired land and for development of the fuel and fertilizer minerals on public domain in 1975. The national forest unselected roadless areas, again exclusive of the 1 million acres in Alaska subject to Native selections, are listed as having been open with moderate or slight restriction to development of all minerals on acquired land and for development of the fuel and fertilizer minerals on public domain.

c, National Park System Wilderness. As of the beginning of 1976, only 0.2 million acres of the National Park System’s statutorily mandated study areas had been designated as wilderness, but an additional 15.4 million acres had been recommended for such designation. Potential wilderness additions totaling 0.4 million acres had been identified but not recommended as yet.⁷⁷ Preliminary proposals had been prepared for another 3.5 million acres, but, of this group, recommendations were to be deferred on 2.2 million acres (Glacier Bay National Monument) pending a mineral survey and on 0.7 million acres (Lake Mead NRA) pending a reclamation study. Studies had not been completed on 4.1 million acres in Big Cypress, Big Thicket, Mount McKinley, and Voyageurs National Parks; Canaveral, Cape Lookout, and Cumberland Island National Seashores; and Glen Canyon National Recreational Area.⁷⁸ Based on past experience, only a very few acres will be recommended out of the 0.1 million acres in the national seashores, whereas much of the 4 million acres (3.2 million Federal acres) in the national parks and the national recreation areas probably will be recommended eventually.

Almost all of the National Park System areas being studied or recommended for wilderness designation in 1975 were either already closed to mineral development or in the process of being closed by mechanisms outside the wilderness review process.

⁷⁵Ibid., at 72, 73-74, 78.

⁷⁶Ibid., at 72.

⁷⁷U.S. National Park Service, Wilderness Study Program, “National Park System Wilderness Recommendations,” Feb. 20, 1975.

⁷⁸as revised January 1976. Acreages include both Federal and non-Federal land.

⁷⁹U.S. National Park Service, Wilderness Study Program, “Acreages Proposed as Wilderness,” May 1975.

The exceptions were the Lake Chelan and Ross Lake National Recreation Areas (approximately 50,000 acres recommended), the Lake Mead National Recreational Area (712,100 acres identified as suitable in a preliminary proposal), and the Glen Canyon National Recreation Area (alternatives ranging from 63,000 to 853,000 acres were presented at public hearings).⁷⁹ However, these areas were already highly restricted with respect to mineral activity in 1975 (see subsection F(2)).

All of the National Park System wilderness-related areas are included in figures reported elsewhere in this appendix, as discussed in section F.

d. National Wildlife Refuge System Wilderness. As of the beginning of 1976, only 0.6 million acres of the National Wildlife Refuge System's statutorily mandated study areas had been designated wilderness. An additional 7.1 million acres had been recommended for wilderness designation, but the recommendations for 1.8 million of these acres (Desert Wildlife Range and Charles Sheldon Game Range) were subject to completion of mineral surveys for which congressional appropriation of funds had been requested. Wilderness recommendations had been delayed on 3.9 million acres in the Nunivak and Izembek units, and wilderness study had been delayed on 13.6 million acres in the Arctic, Clarence Rhode, Hazen Bay, and Kodiak units, due to the Native land selection process in Alaska. The 0.2 million acre Upper Mississippi River Refuge, originally determined to be unsuitable for wilderness designation, was to be re-studied .80

All units in the National Wildlife Refuge System were already closed or highly restricted with respect to mineral activity in 1975 without reference to their status as wilderness or wilderness study areas (see subsection G(1)). Therefore, all of the system's wilderness-related areas are included in the figures reported in subsection G(1).

e. Wilderness Study Program: Overall Status. Table B.4 shows the overall status of the wilderness study program at the end of 1975, based on the data in this subsection.

Table B.4.—Status of Wilderness Study Program in 1975
(Millions of acres)

	National Forest System	National Wildlife Refuge System	Naitonal Park System
Total system ^a	187.2	30.8	27.7b
Designated wilderness	12.0	0.6	0.2
Recommended	3.8	5.3	15.4
Tentative proposal	—	5.7	3.9
Study areas.	12.0	13.8	3.3
Other roadless	43.5		—

^aPublic Land Statistics, table 9.

^bIncludes 2.9 million acres of land under primary reclamation withdrawals: see subsection F(2)

⁷⁹U.S. National Park Service, Wilderness Study Program, February 1976.

⁸⁰U.S. Fish and Wildlife Service, "National Wildlife Refuge System: Current Status of Wilderness Program," January 1976.

2. Bureau of Land Management Roadless Areas

Prior to October 1976 there was no wilderness program for the great bulk of public domain under the primary jurisdiction of BLM. However, as with the Forest Service prior to passage of the Wilderness Act of 1964, BLM on its own had established procedures for designating primitive and natural areas.⁸¹

Areas could be designated under these procedures only if they had been (i) classified for retention under the Classification and Multiple Use Act, which expired in December 1970; (ii) formally withdrawn or reserved by public land order; or (iii) given special status by an act of Congress. Designation of an area purportedly had no effect on its use or management, except as authorized by one of the above three categories of authority. In actual practice, however, primitive and natural areas were often designated without reliance on the three listed categories of authority and were strictly managed for the preservation of their essential characteristics.

The BLM regulations define primitive areas as “extensive natural, wild, and undeveloped areas and settings essentially removed from the effects of civilization” which have “not been disturbed by commercial utilization and . . . are without mechanized transportation.” Of 11 primitive areas designated by the end of 1975, totaling 234,003 acres,⁸² only 2 were formally withdrawn from mining: 40,400 acres were withdrawn from the Mining Law but not the mineral leasing acts by Public Land Order 5386; and 2,671 acres were withdrawn from all forms of mineral activity by Public Land Order 5062. Two additional areas of 5,080 and 27,515 acres, respectively, were segregated from mineral development through classification under the Classification and Multiple Use Act prior to its expiration. A fifth area of 3,941 acres was within the King Range National Conservation Area, where mining is allowed subject to reasonable protective regulations. The remaining six areas, totaling 154,306 acres, had been designated and were being preserved without any apparent basis in law or regulation.

The regulations governing public use of BLM primitive areas restricted travel to “nonmechanized forms of locomotion,” Construction, roads, mechanized equipment, nontransient occupancy, and the landing of aircraft were prohibited “except in connection with activities necessary in the use of the lands for authorized nonrecreation purposes.”⁸³ Although mineral exploration and development, at least under the Mining Law, should have been an authorized nonrecreation purpose in 7 of the primitive areas, BLM officials interviewed in 1976 stated that access for mineral activity would not be allowed in any of the 11 areas.

An additional 27 areas, totaling approximately 1.5 million acres, had been processed through BLM’s Management Framework Planning (MFP) process in 1975 and were being managed for their primitive values, although they had not yet been designated as primitive areas. According to BLM, mining was allowed in these areas. However, the areas serve as a pool for future designations: 4 of the 11 designated primitive areas discussed above were in the undesignated, “managed for primitive values” category in April 1974.

⁸¹43 CFR pt. 2070 (1975).

⁸²U.S. Bureau of Land Management, “List of Primitive Areas,” Aug. 27, 1975.

⁸³43 CFR § 6221.2 (1975).

⁸⁴Information supplied by BLM’s Division of Recreation, January 1976.

BLM field personnel, based on data compiled from the Unit Resource Analyses that precede the systematic MFP planning process, also estimated that approximately 3.9 million more acres might eventually qualify for primitive area treatment.⁸⁴ These 3.9 million acres were not subject to any special protections in 1975.

The BLM regulations⁸⁵ define “outstanding natural areas” as areas of “outstanding scenic splendor, natural wonder, or scientific importance that merit special attention and care in management to ensure their preservation in their natural condition, ” and which “usually are relatively undisturbed [and] representative of rare botanical, geological, or zoological characteristics of principal interest for scientific and research purposes. ” “Natural resources experiment and research areas” are “relatively small areas of land which are used for research or experimental purposes. ” There were 19 research natural areas totaling 44,676 acres and 24 outstanding natural areas totaling 276,937 acres as of February 3, 1976.⁸⁶ As with the primitive areas, the creation of specific natural areas has been accomplished through such varied means as exercise of the President’s implied withdrawal power, classification under the Classification and Multiple Use Act, and simple designation without reference to any specific authority. No specific acreage breakdown was available for 1975.

The regulations governing the use of natural areas in 1975 were even stricter than those governing primitive areas. Not only were persons forbidden to “use, occupy, construct, or maintain improvements unless permitted by law, ” but, even where permitted, such use, occupancy, construction, or maintenance could not be “in a manner inconsistent with the purpose for which the area is established. ”⁸⁷ BLM officials interviewed in 1976 stated that research natural areas were protected to the same extent as primitive areas (no access for mining), but that only the core physical features of outstanding natural areas were so protected.

The 76,000 acres withdrawn or segregated as primitive areas and the entire 45,000 acres of research natural areas are listed in the tables in section C as having been closed to hardrock mineral activity in 1975. The same acreage, except for the 40,000 acres withdrawn by Public Land Order 5386, is listed as having been closed to development of nonhardrock minerals also. The remaining 158,000 acres in primitive areas (plus, with respect to nonhardrock mineral activity, the 40,000 acres withdrawn by Public Land Order 5386), the 1.5 million acres “managed for primitive values, ” and the 277,000 acres in outstanding natural areas are listed in the tables as having been highly restricted for development of all minerals. The 3.9 million acres of areas with primitive potential are listed as having been open with moderate to slight restrictions on mineral activity.

The primitive, “managed for primitive values, ” potential primitive, and natural areas discussed above totaled 6 million acres in 1975, none of which were in Alaska. These 6 million acres were part of an estimated 89.5 million acres in BLM roadless areas (5,000 acres or more) and roadless islands in 1975. Approximately 64 million of these acres were subject to withdrawals under ANCSA, and they are therefore dis-

⁸⁴43 CFR pt. 2070 (1975).

⁸⁵Data supplied by BLM’s Division of Recreation, February 1976. At the time, the division was waiting for verification of the designation and acreage of 13 listed outstanding natural areas in

Nevada, totaling 74,176 acres. These 13 areas are included in the 24 referred to in the text.

⁸⁶43 CFR § 6225.1 (1975).

cussed in section O of this appendix. Another 0.6 million acres were segregated from mineral entry by classification under the Classification and Multiple Use Act and are discussed in subsection M(3). The remaining 18.9 million acres, all in the lower 48 States, were not subject to any special restriction related to their roadless condition, and they are therefore listed (together with the 3.9 million acres of primitive potential areas) in the tables in section C as having been open with moderate to slight restrictions on mineral activity in 1975.

The availability of BLM roadless areas for mineral activity was greatly affected by passage of the Federal Land Policy and Management Act of 1976 (“BLM Organic Act”) in October 1976. Section 603 of the BLM Organic Act requires that all BLM roadless areas of 5,000 acres or more and roadless islands, identified as having wilderness characteristics, be reviewed within 15 years and recommended as to their suitability or nonsuitability for congressional designation as wilderness. The Secretary of the Interior is required to manage such areas, pending a congressional decision on their designation as wilderness,

so as not to impair the suitability of such areas for preservation as wilderness, subject, however, to the continuation of existing mining . . . uses and mineral leasing in the manner and degree in which the same was being conducted on [October 21, 1976]: Provided, That, in managing the public lands the Secretary shall by regulation or otherwise take any action required to prevent unnecessary or undue degradation of the lands and their resources or to afford environmental protection.⁸⁸

Roadless areas and islands not previously withdrawn from hardrock mineral activity under the Mining Law are left open to such activity during the period of review unless subsequently withdrawn for reasons other than preservation of their wilderness character. Areas designated for preservation as wilderness are to be subject to the same restrictions and conditions as national forest wilderness.⁸⁹

3. The Wild and Scenic Rivers System

The Wild and Scenic Rivers Act,⁹⁰ enacted in 1968, created a system of wild, scenic, and recreational rivers. Land within one-quarter mile of the bank of any wild river segment is withdrawn from location under the Mining Law and from mineral leasing. Land within one-quarter mile of the bank of any river designated by Congress for study for inclusion in the system is withdrawn from location under the Mining Law, but not from mineral leasing, until determined to be unsuitable for inclusion in the Wild and Scenic River System or until designated and classified by Congress. Although formally open to mineral leasing, such land will rarely, if ever, be leased. Scenic and recreational river segments are formally open to mining locations and mineral leasing, but again mineral leasing will be rare in scenic segments, at least, and mining locations will be subject to strict regulation.

⁸⁸43 U.S.C.A. § 1782 (Supp. 1977) (emphasis added). Proposed management policies have been published at 44 F.R. 2623, 2694 (1979).

⁸⁹See subsec. H(1).

⁹⁰16 U.S.C. §§ 1271-1287 (1970).

Congress initially designated 8 river segments, totaling approximately 804 miles in length,” as components of the system. About 598 of the 804 miles are on Federal land, and Federal land accounts for almost all of the 275 miles classified as wild. Seven river segments, totaling 378 miles overall and 157 Federal miles, had been added to the system by the end of 1975. The 157 additional Federal miles consist of 99 miles of public domain (of which 64 miles are classified wild) in the Hells Canyon National Recreation Area and 58 miles of acquired land (of which 41 miles are classified wild).

Congress also initially designated 27 river segments for study, of which 3 segments (totaling 460 miles) had been found by the end of 1975 to be not qualified for inclusion in the system, leaving 24 segments (totaling 3,075 miles overall and about 1,320 Federal miles) under study. In January 1975 another 29 river segments, totaling 2,177 miles overall and approximately 1,341 primarily Federal miles (of which 184 miles were on acquired land and 119 were in units of the National Park System), were designated for study.

In sum, excluding mileage in the Hells Canyon NRA or in units of the National Park System that are covered in section F, in 1975 there were 316 miles of Federal river classified wild, 340 miles classified scenic or recreational, and 2,542 miles under study. Almost all of this mileage was on public domain rather than acquired land. At 320 acres per mile for the half-mile-wide corridor along these river segments, these mileages convert to 0.1 million acres classified wild, 0.1 million classified scenic or recreational, and 0.8 million under study.

The acreage classified wild is listed in the tables in section C as having been closed to mineral activity in 1975, The acreage classified scenic or recreational is listed as having been highly restricted. The acreage under study is listed as having been closed to hardrock mineral activity and highly restricted for development of nonhardrock minerals. None of the acreage was in Alaska.

L Surface Resource Development

1. Irrigation Projects

The Act of October 2, 1888, as amended,⁹² effected an automatic withdrawal from entry under the mining and other public land laws of all land theretofore or thereafter actually designated or selected for reservoirs, ditches, or canals for irrigation purposes, until otherwise provided by law. This law remained in effect despite the later passage of the Reclamation Act of 1902.⁹³

Section 3 of the Reclamation Act of 1902⁹⁴ directs the Secretary of the Interior to withdraw land required for irrigation works contemplated under the Act from public entry (“first form withdrawals”): it also authorizes him to withdraw all land believed

⁹² Mileages based on rough estimates provided by the Division of Resource Area Studies, Bureau of Outdoor Recreation, Department of the Interior, February 1976.

⁹³ 43 U.S.C. § 662 (1970).

⁹⁴ See *PLRBC Withdrawals Study*, note 9, at 229-231

⁹⁵ 43 U.S.C. § 416 (1970).

to be susceptible to irrigation from such works (“second form withdrawals”). Mining was originally barred on first form but not on second form withdrawals.” In 1932, Congress authorized the Secretary, at his discretion, to open land withdrawn for construction purposes under the reclamation laws to location under the Mining Law.⁹⁶ Interior’s regulations now treat all land withdrawn for reclamation purposes as closed to location under the Mining Law unless formally opened by the Secretary, and require the Bureau of Reclamation’s consent to any opening.⁹⁷

Land withdrawn for reclamation purposes has been open to mineral leasing since the passage of the Leasing Act in 1920, although leases are subject to special stipulations protecting the dominant reclamation use.⁹⁸ As discussed in subsection F(2), national recreation areas have been superimposed on portions of many reclamation withdrawals, and for such land further lease stipulations are required to protect the recreation use (if leasing is allowed).

As of June 30, 1974, there were about 5.7 million acres of public domain and 1.9 million acres of acquired land withdrawn for reclamation purposes, all in the lower 48 States.⁹⁹ On 2.7 million acres of the public domain included in certain NRAs (see subsection F(2)), hardrock minerals were subject to disposition through leasing rather than through location under the Mining Law, and leases could not be granted if mineral development would have a significant adverse effect on the administration of the land for recreation purposes. These 2.7 million acres are listed in the tables in section C as having been highly restricted for mineral activity in 1975. The remaining 3 million acres of public domain and the 1.9 million acres of acquired land are listed as having been closed to hardrock mineral activity and highly restricted for development of non-hard rock minerals.

2. Stockraising and Agricultural

Several public land statutes allow acquisition of private title to public land for agricultural or stockraising purposes, with retention by the Federal Government of all or some minerals in the subsurface estate, together with the right of anyone to enter upon such land under the mining or mineral leasing laws to explore for and develop the federally reserved mineral deposits.¹⁰⁰ The prospector or miner generally must pay the surface owner for any damages to crops, agricultural improvements, and the value of the land for grazing or agricultural purposes, or post a bond to cover such damages.¹⁰¹ This narrow measure of damages, together with the lack of control by the surface owner over entry on his property and the lack even of any notice prior to entry, has often led to considerable resistance by surface owners to mineral exploration and development activity.¹⁰² However, this resistance usually is overcome by payments (not

⁹⁶Instructions, 35 L.D. 216 (1906); *Loney v. Scott*, 112 P. 172 (Ore. 1910).

⁹⁷43 U.S.C. § 154 (1970).

⁹⁸43 CFR subpt. 3816 (1975); see *BLM Withdrawals Study*, note 9, at 236.

⁹⁹43 CFR § 3501.3-2(c) (1975).

¹⁰⁰*Public Land Statistics*, table 9.

¹⁰¹See, for example, the Stockraising Homestead Act of 1916, 43 U.S.C. § 299 (1970).

¹⁰²Mall, “Federal Mineral Reservations,” 10 *Land and Water L. Rev.* 1 (1975).

¹⁰³*Ibid.*; *Federally Owned Locatable Minerals*, hearing before the Subcomm. on Public Lands of the Senate Comm. on Int. & Ins. Affairs, 93rd Cong., 1st sess. (1969). For coal only, more control has been given to the surface owner by sec. 714 of the Surface Mining Control and Reclamation Act of 1977, Public Law 95-87, 91 Stat. 445, 524 (1977).

legally required) to the surface owner in excess of the statutorily mandated damage payments.

As of the end of 1975, the United States had reserved all mineral rights in 39.4 million acres and rights to some or all of the Leasing Act minerals in an additional 23.9 million acres of land homesteaded for agricultural or stockraising purposes.¹⁰³ All 63.3 million acres were public domain and all but a tiny portion were in the lower 48 States. All 63.3 million acres are listed in the tables in section C as having been open with moderate to slight restrictions for development of the federally reserved minerals in 1975.

Section 10 of the Stockraising Homestead Act of 1916¹⁰⁴ authorizes withdrawals under the Pickett Act of “Lands containing waterholes or other bodies of water needed or used by the public for watering purposes” and also of certain access corridors (stock driveways) of specified maximum size “necessary to insure access by the public to watering places reserved hereunder and needed for use in the movement of stock to summer and winter ranges or to shipping points.” The waterholes or public water reserves can be withdrawn from development of all but the metalliferous minerals. The stock driveways, however, remain open to development of all minerals, subject to such regulations and restrictions as may be prescribed by the Secretary of the Interior¹⁰⁵ and subject to retention of surface title by the United States.¹⁰⁶ Although stock driveways “are now often of little practical significance”¹⁰⁷ to the stockraising industry, 2.5 million acres remained withdrawn in the lower 48 States for stock driveway purposes at the end of 1974.¹⁰⁸ However, since access to the underlying minerals is relatively unaffected by the withdrawals, the 2.5 million acres are listed in the tables in section C as having been open with moderate to slight restrictions for mineral activity.

3. Water Supply and Control

The authority to withdraw waterholes or other public watering places, discussed in the previous paragraph, was at first exercised by the President on a selective basis. However, in 1926, a blanket order was issued (“Public Water Reserve No. 107”) withdrawing all land within one-quarter of a mile of any spring or waterhole.¹⁰⁹ Such land remained open to metalliferous location. Furthermore, various statutes have authorized the withdrawal of specific watershed land in order to protect municipal and other water supplies. Some of these statutes closed the withdrawn land to mining.¹¹⁰ Including additional watershed withdrawals by the Executive, about 1.5 million acres were withdrawn for water uses at the end of 1974¹¹¹ and are listed in the tables in section C as having been highly restricted with respect to mineral activity in 1975.

As of June 30, 1974, there were 0.7 million acres of public domain and 7.1 million acres of acquired land, almost all in the lower 48 States, dedicated to water resource development projects of the Army Corps of Engineers.¹¹² This acreage was closed to mineral activity in 1975 and is so listed in the tables in section C.

¹⁰³Public Land Statistics, table 17.

¹⁰⁴43 U.S.C. § 300 (1970).

¹⁰⁵See 43 CFR subpt. 3815 (1975).

¹⁰⁶43 U.S.C. §§ 299, 300 (1970).

¹⁰⁷PLIRC Withdrawals Study, note 9, at 196.

¹⁰⁸Bennethum and Lee, note 1, at 43.

¹⁰⁹PLIRC Withdrawals Study, note 9, at 182-189.

¹¹⁰Ibid., at 192-194.

¹¹¹Bennethum and Lee, note 1, at 43.

¹¹²Public Land Statistics, table 9.

J. Energy Development

1. Powersites

Under section 24 of the Federal Power Act,¹¹³ the filing of an application by anyone for a permit or license for a powersite automatically withdraws the land from all forms of disposition, including mineral development. In addition, classification of land as valuable for powersite purposes by the U.S. Geological Survey (USGS)¹¹⁴ effects a withdrawal of such land under section 24.15. Some powersite withdrawals are made without reliance on the Federal Power Act, either pursuant to the President's Pickett Act authority, in which case the withdrawn land is open to location of metalliferous minerals, or, on occasion, pursuant to his implied authority.¹¹⁶

In 1955, Congress opened all powersite withdrawals and reservations not covered by a power project license or permit to the operation of the mining and mineral leasing laws. Operations on placer claims, however, may be prohibited or regulated by order of the Secretary of the Interior. Furthermore, all mineral development activities are subject to being overridden at any time for power development without payment of any compensation.¹¹⁷ Under such a condition, mineral exploration and development activities will be undertaken at a powersite only if the mineral potential is high and there is little chance of power development at the site for the projected life of the mine. Nevertheless, 233 location certificates and 211 affidavits of labor were filed during fiscal year 1975 for mining claims within lands withdrawn for powersite purposes.¹¹⁸

At the end of 1974, there were 15.2 million acres withdrawn as powersites.¹¹⁹ Most of the withdrawn acreage was due to powersite withdrawals, classifications, and designations by USGS.¹²⁰ One USGS powersite classification, the Ramparts powersite created in 1965 on the Yukon River in Alaska, accounted for 9 million acres,¹²¹ which were overlain by subsequent withdrawals in 1971 under ANCSA: 6.9 million acres by d-2 withdrawals, 1.3 million acres by d-1 withdrawals, and 0.8 million acres by withdrawals for Native selections. The 9 million acres are included as part of the 15.2 million acres of powersite withdrawals listed in the tables in section C as having been highly restricted with respect to mineral activity in 1975. They are also included in the relevant ANCSA listings discussed in section O. The overlap is accounted for in the subtotals of the section C tables.

2. Pipeline Corridors

In 1971, the Secretary of the Interior withdrew 4.5 million acres for a utility and transportation corridor across Alaska to the Prudhoe Bay oilfields.¹²² A subsequent

¹¹³16 U.S.C. § 818 (1970).

¹¹⁴Pursuant to its classification authority under 43 U.S.C. § 31 (1970).

¹¹⁵See *PLLRC Withdrawals Study*, note 9, at 361.

¹¹⁶*Ibid.*, at 356-358.

¹¹⁷30 U.S.C. §§ 621-622 (1970); 43 CFR pt. 3730 (1975).

¹¹⁸*Public Land Statistics*, table 84.

¹¹⁹See Bennethum and Lee, note 1, at 35.

¹²⁰See *PLLRC Withdrawals Study*, note 9, at 352, 363, table G.1.

¹²¹Statement of Jack O. Horton, Assistant Secretary, Land and Water Resources, U.S. Department of the Interior, hearing on Public Land Withdrawals before the Subcomm. on Public Lands, House Comm. on Int. and Ins. Affairs, 94th Cong., 1st sess., Oct. 21, 1975, table 2.

¹²²*Ibid.*

withdrawal was made for a smaller gas pipeline corridor to Canada, bringing the total acreage withdrawn for pipeline corridors in Alaska to 5.3 million acres, of which 2.9 million acres were completely withdrawn from mineral activity. The remaining 2.4 million acres were open only to location of metalliferous minerals under the Mining Law.¹²³ All 5.3 million acres are listed in the tables in section C as having been closed to development of nonhardrock minerals in 1975. The 2.4 million acres open to location of metalliferous minerals are listed as having been open with moderate to slight restrictions for hardrock mineral activity, since almost all of the essential hardrock minerals (see appendix A) are metalliferous.

3. Atomic Energy

Prior to 1970, land had been withdrawn for the Atomic Energy Commission (AEC) for testing and research facilities and for control over source materials. The orders almost always withdrew the land from location under the Mining Law and often explicitly withdrew it from the leasing laws as well.¹²⁴ AEC had special authority to issue leases for uranium source material. By 1974, the AEC'S jurisdiction and authority over this land had been transferred to the Energy Research and Development Administration (ERDA), which was itself merged into the new Department of Energy in 1977. As of June 30, 1974, there were 1.4 million acres of public domain and 0.7 million acres of acquired land withdrawn for ERDA,¹²⁵ all in the lower 48 States and all listed in the tables in section C as having been closed to mineral activity in 1975.

4. Tennessee Valley Authority

The Tennessee Valley Authority was not allowing mineral leasing on its 0.9 million acres¹²⁶ of acquired land in 1975.¹²⁷ The 0.9 million acres are listed in the tables in section C as having been formally closed to hardrock mineral activity and highly restricted with respect to nonhardrock mineral activity in 1975.

K. Mineral Conservation

1. Petroleum and Oil Shale Reserves

a. **Naval Reserves.** Seven naval petroleum and oil shale reserves were established between 1912 and 1923 to assure fuel for defense purposes. Following the Teapot Dome scandal in the 1920's, they were administered almost exclusively for conservation rather than production, until passage of the Naval Petroleum Reserves Production Act of 1976 which authorized expanded exploration on Naval Petroleum Reserve No. 4 in Alaska (NPR4, redesignated as the National Petroleum Reserve in Alaska on June 1, 1977) and maximum efficient production for at least 3 years from Naval Petroleum Reserve Nos. 1, 2, and 3 in the lower 48 States.¹²⁸

¹²³ See Bennethum and Lee, note 1, at 45.

¹²⁴ *PLLR Withdrawals Study*, note 9, at 299-303.

¹²⁵ *Public Land Statistics*, table 9.

¹²⁶ *Ibid.*

¹²⁷ Bennethum and Lee, note 1, at 47.

¹²⁸ Public Law 94-258, 90 Stat. 303, 304-305, 308 (1976).

NPR4 contains approximately 23.7 million acres of public domain. The other three petroleum reserves and the three oil shale reserves contain a total of just over 0.2 million acres.¹²⁹ All of the reserves are expressly closed to mineral leasing under the Mineral Leasing Act of 1920,¹³⁰ and therefore all 23.9 million acres are listed in the tables in section C as having been closed to development of the Leasing Act minerals in 1975.

The status of the reserves with respect to development of the hardrock minerals was more complex. Although it seems generally to have been assumed that the reserves were closed to locations under the Mining Law, all of the reserves other than NPR4 were established pursuant to the President's authority under the Pickett Act, which permits entry for development of metalliferous minerals under the Mining Law. "The 0.2 million acres in these reserves are therefore listed in the tables in section C as having been open with moderate or slight restrictions for hardrock mineral activity in 1975.

NPR4 itself was established by Executive Order 3797-A pursuant to "the power vested in [the President] by the laws of the United States." The order provided that "the reservation hereby established shall be for oil and gas only and shall not interfere with the use of the lands or waters within the area for any legal purpose not inconsistent therewith." This language by itself does not preclude locations under the Mining Law, but at most subjects any mining claim or mineral patent to a reservation of deposits of oil and gas. All of northern Alaska, including NPR4, was withdrawn from mining and mineral leasing in 1943:¹³² however, this withdrawal was revoked in 1960, leaving NPR4 in its original withdrawal status.] Certain portions of NPR4 in the vicinity of Alaskan Native villages were withdrawn in 1972 from all forms of appropriation, including locations under the Mining Law, for Native land selection purposes, and some or all of the remainder of NPR4 may have been completely withdrawn by other withdrawals under ANCSA. In short, the net status of NPR4 in 1975 was not clear. However, NPR4 was unequivocally closed to entry under the Mining Law early in 1976, so its 23.7 million acres are listed in the tables in section C as having been closed to hardrock mineral activity in 1975.

The Department of the Interior has established a narrow buffer zone around the perimeter of the petroleum reserves where practicable to protect against drainage by wells on adjacent land. Leasing of oil and gas is precluded in this buffer zone, which amounted to 0.1 million acres in the lower 48 States in 1974. Since the restriction only applies to oil and gas, the 0.1 million acres are listed in the tables in section C as having been open with slight or moderate restriction for mineral activity in 1975.

b. Other Oil Shale Withdrawals. In 1930, a blanket withdrawal of Federal oil shale land from mineral leasing was effected pursuant to the President's authority under the Pickett Act. Subsequent orders identified particular land in Colorado, Utah, and Wyoming included in the withdrawal and opened that land first to oil and gas leasing and then to sodium leasing.¹³⁶ In 1968, however, the land (totaling 3.7 million acres)

¹²⁹Office of Naval Petroleum and Oil Shale Reserves, Department of the Navy, *History of Naval Petroleum and Oil Shale Reserves* (1973).

¹³⁰30 U.S.C. § 181 (1970).

¹³¹43 U.S.C. § 142 (1970).

¹³²Public Land Order 82, 8 F.R. 1599 (Feb. 4, 1943).

¹³³Public Land Order 2215, 25 F.R. 12599 (Dec. 8, 1960).

¹³⁴Naval Petroleum Reserves Production Act of 1976, § 102, 90 Stat. 303 (1976).

¹³⁵Bennethum and Lee, note 1, at 35.

¹³⁶PLLRIC *Withdrawals Study*, note 9, at 166-168.

was withdrawn from metalliferous location under the Mining Law and from sodium leasing except where there was a finding in a particular case that mining of the sodium would not have a significant adverse effect on oil-shale values.¹³⁷ The land was thus open only for oil and gas leasing in 1975, and so the 3.7 million acres are listed in the tables in section C as having been closed to hardrock mineral activity and highly restricted (open only for oil and gas) for development of all other minerals in 1975.

2. Geothermal Resources

On February 7, 1967, the Department of the Interior issued a proposed blanket withdrawal of 86 million acres of public land from the mining and mineral leasing laws to protect geothermal steam resources. Because of intense congressional opposition to this proposed withdrawal, it was superseded on March 24, 1967, by a revised application for withdrawal of 1.1 million designated acres from the mining but not the mineral leasing laws. Leases were to be issued only if the Secretary found that the proposed use of the land would not adversely affect the geothermal resource or hinder its development or utilization. Although the withdrawal application never developed into an actual withdrawal, the mere fact of application segregated the land from location under the Mining Law and from leasing except as approved by the Secretary.¹³⁸ The withdrawal application was modified in 1973 to allow geothermal leasing under the Geothermal Steam Act of 1970 and was finally cancelled in June 1976.¹³⁹ However, in 1975 the land was still closed to hardrock mineral activity and highly restricted with respect to development of all other minerals. The 1.1 million acres are so listed in the tables in section C.

L. Surface Occupancy

1. Federal Use

Small tracts of Federal land are administered for specific agency uses by a variety of Federal agencies. Specific uses include airports, lighthouses, air navigation facilities, post offices, health facilities, prisons, test centers, office buildings, and so forth.¹⁴⁰ As of June 30, 1974, close to 0.5 million acres of public domain and another 0.5 million acres of acquired land were dedicated to such discrete uses under the primary jurisdiction of agencies such as the Agricultural Research Service, the Postal Service, and various agencies of the Department of Transportation.¹⁴¹ These 1 million acres do not include more extensive surface uses for irrigation projects, water resource development projects, and atomic energy research, which are discussed in sections I and J. Nor do they include withdrawals by the major land management agencies of sites for

¹³⁷ *Ibid.*, at 170; Hearing on Public Land Withdrawals, note 121, table 2.

¹³⁸ *PLLRC Withdrawals Study*, note 9, at 181-184.

¹³⁹ 41 F.R. 22964 (June 8, 1976).

¹⁴⁰ *PLLRC Withdrawals Study*, note 9, at 342-350.

¹⁴¹ *Public Land Statistics*, table 9.

administrative buildings and public service and recreation facilities, which amounted to around 1.9 million acres in 1975.¹⁴²

Land used for agency purposes is usually formally withdrawn from mineral activity. Even without a formal withdrawal, the land is considered closed to mineral activity if it contains improvements created by or under the authority of the Federal land management agency.¹⁴³ Thus, the 2.9 million acres discussed in the previous paragraph are listed in the tables in section C as having been closed to mineral activity in 1975.

2. Non-Federal Use

Various statutes provided for the reservation of townsites on and easements across the public domain. The total amount of land reserved for such spatial uses in 1975 was approximately 2.5 million acres,¹⁴⁴ which is all listed in the tables in section C as having been closed to mineral activity, although an unknown portion of the acreage overlaps acreage discussed elsewhere in this appendix or is formally open to mineral leasing.

Small (5 acres or less) tracts of Federal land classified as chiefly valuable for residence, recreation, business, or community site purposes could be leased or sold, until recently, under the Small Tract Act of 1938.¹⁴⁵ The minerals in land sold or leased are reserved to the United States. Under regulations in force in 1975,¹⁴⁶ the reserved minerals were formally available for mineral leasing but were closed to location under the Mining Law. However, there were only 351 acres under lease in 1975 and only 49 acres had been sold during fiscal 1975.¹⁴⁷ A more significant impact on mineral activity resulted from the classification of almost 0.5 million acres as available for disposition under the Act in 1975.¹⁴⁸ Applications for lease or purchase segregate such land from the operation of the mining and mineral leasing laws. The regulations also purport to segregate land classified but for which no application is pending,¹⁴⁹ despite the lack of any apparent statutory authority for such segregation. Due to the regulation, the 0.5 million classified acres are listed in the tables in section C as having been highly restricted with respect to mineral activity in 1975.

Almost 40,000 acres of Federal land were under lease in 1975 under the Recreational and Public Purposes Act of 1926.¹⁵⁰ However, the mineral deposits in this land were reserved to the United States, together with the right to mine and remove such deposits under applicable laws and regulations.¹⁵¹ This acreage is not listed in the tables in section C.

¹⁴²Bennethum and Lee, note 1, at 35, figure 1. Withdrawals by the Forest Service for such purposes amounted to over 750,000 acres through 1967. See *Access Hearings*, note 62, at 70-71.

¹⁴³*United States v. Cohan*, 70 L.D. 178 (1963); see *United States v. Schaub*, 103 F. Supp. 873 (D. Alaska 1952), *aff'd*, 207 F.2d 325 (9th Cir. 1953).

¹⁴⁴Bennethum and Lee, note 1, at 43; see *PLLHC Withdrawals Study*, note 9, table G.4. Land in incorporated cities, towns, or villages is not subject to the mineral leasing acts. 30 U.S.C. §§ 181,

352 (1970).

¹⁴⁵43 U.S.C. § 682b (1970).

¹⁴⁶43 CFR § 2731.6-3 (1975).

¹⁴⁷*Public Land Statistics*, table 31.

¹⁴⁸*Ibid.*, table 89.

¹⁴⁹43 CFR § 2731.2(b) (1975).

¹⁵⁰*Public Land Statistics*, table 33.

¹⁵¹30 U.S.C. § 869-1 (1970).

M. General

1. Statewide Withdrawals

Congress has withdrawn all the public domain in Alabama, Kansas, Michigan, Minnesota, Missouri, Oklahoma, and Wisconsin, totaling 1.8 million acres in 1975,¹⁵² from the operation of the Mining Law.¹⁵³ Approximately 1.4 million of these acres were in national forests and around 57,000 acres were BLM land; the remainder was under the jurisdiction of other agencies¹⁵⁴ and has been discussed in the earlier sections of this appendix. Of the 1.4 million national forest acres, 1.1 million were in Minnesota and were available for leasing of both hardrock and Leasing Act minerals subject to the consent of the Secretary of Agriculture.¹⁵⁵ However, 0.5 million of these Minnesota public domain national forest acres were within the Boundary Waters Canoe Area, a designated wilderness area,¹⁵⁶ and already have been discussed in subsection H(1). Thus, the net result in 1975 of the congressional statutes affecting these seven States was the closure of 0.1 million acres of BLM land and 0.3 million acres of national forest to hardrock mineral activity and the availability of 0.6 million acres of public domain national forest through lease rather than through location under the Mining Law. The 0.1 million BLM acres and 0.3 million national forest acres are listed in the tables in section C as having been closed to hardrock mineral activity in 1975, but open with moderate or slight restriction for development of all other minerals. The 0.6 million national forest acres are listed as having been open with moderate or slight restriction for development of all minerals.

2. Forest Service

As of June 30, 1974, 160.2 million acres of public domain and 27 million acres of acquired land were under the primary jurisdiction of the Forest Service.¹⁵⁷ Of this acreage, 69 million acres of public domain and 0.3 million acres of acquired land in wilderness and roadless areas are discussed and tabulated in subsection H(1); 1 million acres of public domain covered by Alaskan Native selections are discussed and tabulated in subsection O(1); 11.4 million acres withdrawn for various other reasons¹⁵⁸ are included in the figures discussed and tabulated in preceding sections of this appendix; and 0.9 million acres in the seven States closed by Congress to operation of the Mining Law are discussed and tabulated in subsection 1 of this section. This leaves approximately 77.9 million public domain acres and 26.7 million acquired acres of national forest land yet to be included in the tables in section C. The United States did not own some or any of the mineral rights in approximately 10.2 million acres of the acquired national forest land in 1975,¹⁵⁹ but mineral activity on such land could be ar-

¹⁵²Public Land Statistics, table 7.

¹⁵³30 U.S.C. §§ 48 (Michigan, Minnesota, Wisconsin), 49 (Kansas, Missouri) and 171 (Alabama) (1970); 43 U.S.C. § 1098 (1970) (Oklahoma). The mining laws were subsequently applied to certain ceded Indian land in Oklahoma by the Acts of March 2, 1895, 28 Stat. 899, and June 6, 1900, 31 Stat. 680. Four other States containing negligible amounts of public domain (Illinois, Indiana, Iowa, Ohio) are subject to the operation of the Mining Law, although they are omitted from the list of Mining Law States in the

Department of the Interior's regulations. See 43 CFR § 3811.2-1 (1975).

¹⁵⁴Public Land Statistics, table 9.

¹⁵⁵16 U.S.C. § 508b (1970).

¹⁵⁶Wilderness Hearing, note 67, at 29-30.

¹⁵⁷Public Land Statistics, table 9.

¹⁵⁸Access Hearings, note 62, at 70-71.

¹⁵⁹U.S. Forest Service, *Minerals Area Management on National Forest System Lands* 25 (1974).

ranged through the non-Federal owners of the reserved or outstanding mineral rights. Thus, the entire 104.6 million acres are listed in the tables in section C as having been available with moderate or slight restrictions for development of all¹⁶⁰ minerals in 1975.

3. Bureau of Land Management

The Classification and Multiple Use Act of 1964, which expired in December 1970, authorized the Secretary of the Interior to classify and manage lands under the exclusive jurisdiction of BLM for multiple use, including specification of dominant uses and preclusion of uses inconsistent with the dominant use specified for any particular area.¹⁶¹ Classification or proposed classification segregated the land involved from mining locations and mineral leasing unless otherwise specified. There were 3.9 million acres segregated from mining locations but not mineral leasing by classifications under this Act.¹⁶² Of these, 3,246,624 acres were in Alaska and were covered in 1975 by the subsequent withdrawals under ANCSA,¹⁶³ which are discussed in section O. An additional 32,595 acres were included in designated BLM primitive areas, which are discussed in subsection H(2). The remaining 0.6 million acres were still considered to be segregated from mining in 1975. They are listed in the tables in section C as having been closed to hardrock mineral activity and highly restricted with respect to development of all other minerals in 1975.

The total amount of Federal land under the exclusive jurisdiction of the BLM as of June 30, 1974, excluding Naval Petroleum Reserve No. 4 in Alaska, was 447.3 million acres,¹⁶⁴ of which all but 134.6 million acres of public domain and 2.3 million acres of acquired land¹⁶⁵ have already been discussed or will be discussed in the next sections. These 136.9 million acres are listed in the tables in section C as having been open to mineral activity with slight to moderate restrictions in 1975.

N. State Selections and Private Entries Except for Alaska

The acts granting statehood to former territories have granted to each newly admitted State the right to select a certain amount of public domain for various specific and general purposes. The selected land passes from Federal to State ownership. Upon initial selection, the land is segregated from any other form of disposition under the public land laws, including mining or mineral leasing. Actual title passes when a land patent is issued. Small amounts of Federal land continue to pass into private ownership under the homestead and other public land laws, and entries or applications under those laws also segregate the land from mineral activity. However, pending

¹⁶⁰Hardrock as well as Leasing Act minerals can be leased on all or almost all national forest acquired land. See Reorganization Plan No. 3 of 1946, § 402, 60 Stat. 1099 (1946).

¹⁶¹78 Stat. 986 (1964).

¹⁶²Bennethum and Lee, note 1, at 42.

¹⁶³Ibid.

¹⁶⁴*Public Land Statistics*, tables 9 and 10.

¹⁶⁵The 134.6 million and 2.3 million figures were calculated by subtracting all other acreage figures in the tables in sec. C, except

for the homestead acreage (which constituted all but 2.5 million of the acreage reported under Stockraising and Agricultural), from the total Federal public domain and acquired acreage listed in *Public Land Statistics*, table 7. The resulting total figure of 136.9 million acres, plus the 24.3 million acres in BLM roadless areas not designated as primitive or natural discussed in subsec. H(2), is amazingly close (considering the nature of the calculations in this appendix) to the 158.8 million acres listed as vacant (unreserved) BLM land in *ibid.*, table 10.

State selections and entries outside Alaska totaled less than 50,000 acres in 1975,¹⁶⁶ so no entry was made in the tables in section C.

O. Alaska Land Disposal and Classification

The Alaskan land situation is extraordinarily complex. The Federal Government originally owned all of Alaska, having purchased it from Russia in 1867. By the beginning of 1976, when the statistics in this appendix were compiled, approximately 90.6 million acres of public domain and 18,000 acres of acquired land, covered in the preceding sections of this appendix, had been designated for military use (2.4 million acres), Native reservations (0.1 million acres), national parks and monuments (7 million acres), wildlife refuges (22.2 million acres), national forests (20.7 million acres), the Ramparts water powersite (9 million acres), pipeline corridors (5.3 million acres), National Petroleum Reserve No. 4 (23.7 million acres), and surface occupancy for Federal facilities (0.2 million acres).¹⁶⁷ One million acres had passed into private ownership. The remaining 273 million acres, as well as some portions of the existing Federal reserves, were the subject of an extensive land selection process, with around 104.5 million acres scheduled to go to the State under the Alaska Statehood Act and approximately 44.8 million acres scheduled to go to the Natives under the Alaska Native Claims Settlement Act (ANCSA).¹⁶⁸ When selections are completed, the Federal Government will own about 215 million acres, or about 59 percent of the total onshore land in Alaska.

1. Native Selections

At the end of 1975, approximately 80 million acres were withdrawn from availability for mineral activities under the Federal mineral laws as a result of Native selections. Around 44.8 million of these acres will eventually pass into Native ownership. Although this acreage will no longer be available under the Federal mineral laws, it will be available for development or disposal as the Natives see fit. The Native regional corporations will control access to minerals on the 40 million acres conveyed under sections 12, 14, and 16 of ANCSA, and several of them will likely favor development, since they have emphasized mineral potential in making their land selections. In fact, some of them have obtained extensive mineral surveys of land available to them for selection, usually in return for certain development rights in the land eventually selected. Other Native groups will control access to minerals in the 4.8 million acres conveyed under sections 18 and 19, and, since these acres will often encompass culturally significant areas, these groups may be somewhat less favorable to mineral activity.¹⁶⁹

ANCSA'S mineral revenue distribution scheme may act as a disincentive to development of some mineral deposits. Under the Act, mineral revenues from each region

¹⁶⁶Public Land Statistics, table 10.

¹⁶⁷See *ibid.*, table 9, and the preceding sections of this appendix.

¹⁶⁸43 U.S.C. §§ 1601-1624 (1976).

¹⁶⁹Office of Technology Assessment, U.S. Congress, *Analysis of Laws Governing Access Across Federal Lands: Options for Access in Alaska* 119-121 (1979).

are shared among all 13 regional corporations, with only 30 percent being retained by the regional corporation whose land is being developed.

Of the 40 million acres of subsurface (mineral) rights to be controlled by the regional corporations, around 3.5 million acres will underlie Federal surface and therefore may be subject to certain restrictions on mineral activity by the Federal surface management agency. The split or severed surface and subsurface ownership results from Native selections of land within the National Wildlife Refuge System and within Naval Petroleum Reserve No. 4. The United States retains the subsurface rights in such land,¹⁷⁰ but the appropriate Native regional corporation is authorized to select in lieu subsurface estate in an equal acreage from other Federal land available for selection in the region, if possible.

Rough data available in early 1976 indicated that Native groups had selected at least 1.9 million acres of surface inside the National Wildlife Refuge System and 1.6 million acres inside Naval Petroleum Reserve No. 4 (NPR4). As a result, the regional corporations have selected at least 3.5 million acres of in lieu subsurface estate underlying federally retained surface outside the refuges and NPR4. '7'

The severed estate situation could restrict mineral activity with respect to both (a) the Native subsurface estate outside the refuges and NPR4 (if the subsurface underlies Federal surface subject to protective management practices) and (b) the Federal subsurface inside the refuges and NPR4 (if the subsurface underlies Native surface deemed important for subsistence or cultural purposes). However, the Federal subsurface in both the refuges and NPR4 was already closed in 1975 to activities initiated under the Federal mineral laws.

Mineral activity could also be inhibited on some of the almost 16 million acres granted directly (surface and subsurface) to the regional corporations under section 12, since such selections, except from "deficiency" land, are required to be made in a checkerboard (by township) manner. However, the effect on mineral tract assemblage should not be nearly as adverse, in most instances, as the effect of the similar checkerboarding (by section) of Federal and railroad lands in the lower 48 States, since a township contains 36 sections (each section is a square mile) and is therefore large enough to avoid most problems of fragmented ownership.

In summary, the ANCSA Native selection process resulted in around 80 million acres being closed at the end of 1975 to mineral activity initiated under the Federal mineral laws (excepting preexisting rights). However, much of this acreage was available in various degrees for mineral exploration through contracts with the soon-to-be (Native) owners of around 44.8 million of the acres.

Approximately 4.8 million of the 80 million acres were almost certain selections of former Native reserves and individual allotments under sections 18 and 19 of ANCSA.

¹⁷⁰Land selected within a national wildlife refuge also remains subject to the laws and regulations governing use and development of such refuge. In effect, the Federal Government retains almost complete control of the surface and subsurface. However, one possible reading (not accepted by the Government) of the relevant sections of ANCSA would allow the Natives to obtain sub-

surface rights in all land selected by regional corporations and some land selected by village corporations (under subsection 12(b)) in wildlife refuges or Naval Petroleum Reserve No. 4.

¹⁷¹Acreage figures and other information presented in this section of the appendix were obtained from the Department of the Interior, unless otherwise noted.

Since the Native villages and individuals will receive title to the subsurface as well as the surface and are expected to be more protective of specific cultural and subsistence values than the regional corporations, the entire 4.8 million acres are listed in the tables in section C as having been moderately restricted with respect to mineral activity in 1975.

The regional corporations will control the subsurface estate in the remaining 40 million acres of eventual Native land. Only about 26 million of these acres were fairly certain at the end of 1975: approximately 17 million acres of village corporation selections and 9 million acres of required (checkerboard) regional corporation selections. These 26 million acres are listed in the tables in section C as having been available for mineral activity subject to slight or moderate restrictions in 1975.

The remaining 14 million acres of subsurface estate to be controlled by the regional corporations will come out of the 49.2 million acres of remaining selections estimated to exist at the end of 1975. Although some private mineral exploration was underway in 1975 on these 49.2 million acres as a result of Native contracts that provided the explorer with funds or future development rights, this acreage is listed in the tables in section C as having been closed to mineral activity in 1975.

The 80 million acres of Native selections included approximately 1 million acres in existing national forest¹⁷² and 2.6 million acres in areas selected by the State of Alaska. The overlap is handled in the tables in section C by reducing the "National forest roadless" and "Alaska State selections" acreages. Although the Natives also selected at least 1.9 million acres in the National Wildlife Refuge System and 1.6 million acres inside Naval Petroleum Reserve No. 4, no reductions were made in the "Fish and wildlife" and "Petroleum and oil shale reserves" acreages reported in the tables in section C, since the Federal Government retains the subsurface estate in those areas and the Natives selected in lieu subsurface estate elsewhere.

2. The National Conservation Systems (d-2 Withdrawals)

Subsection 17(d)(2) of ANCSA directed the Secretary of the Interior to withdraw up to 80 million acres of unreserved public land in Alaska that he deemed suitable for inclusion in the National Park, Forest, Wildlife Refuge, and Wild and Scenic Rivers Systems. The Act required the land to be withdrawn from all forms of appropriation under the public land laws, including the mining and mineral leasing laws, from State selection under the Alaska Statehood Act, and from selection by Native regional corporations, except to the extent the withdrawal overlapped the statutory subsection 11(a) withdrawals for Native selection purposes, in which case Native regional and village corporation selections were allowed. The Secretary withdrew a full 80 million acres.

On December 17, 1973, Secretary Morton recommended that 83.5 million acres be added to the four conservation systems in Alaska. Approximately 65 million of the 83.5 million acres were lands previously withdrawn pursuant to subsection 17(d)(2). The subsection 17(d)(2) withdrawal remained in effect as to such lands until December 18,

¹⁷²Access Hearings, note 62, at 77.

1978. The subsection 17(d)(2) withdrawal terminated on December 18, 1973 for the 15 million acres not recommended. The other 18.5 million acres recommended for inclusion were lands that had been previously withdrawn pursuant to subsection 17(d)(1), to be discussed in subsection 3 below. Thus, the net effect of the “d-2” withdrawal at the end of 1975 was 65 million acres closed to mineral activity.

In late 1978, subsequent to the compilation and analysis of the statistics presented in this appendix, major new executive withdrawals and reservations, totaling some 120 million acres, were made in Alaska. Approximately 110 million acres covered by congressional or administration conservation system proposals were withdrawn by the Secretary of the Interior from settlement, sale, entry, location, or selection under the public land laws, including the Mining Laws. Eleven million acres of existing national forest were similarly withdrawn upon application by the Secretary of Agriculture. Subsequently, 56 million of these 120 million acres were reserved as national monuments by President Carter. All of this land was already closed to mineral leasing as a result of the “d-1” withdrawals discussed in subsection 3 below. Thus, the new withdrawals and reservations did not result in any increase in the amount of Federal land withdrawn from availability for development of the fossil fuel and fertilizer minerals. Most of the 120 million acres had also been previously closed to all entries under the Mining Law as a result of the earlier “d-2” or “d-1” withdrawals. According to a rough estimate provided to OTA by BLM’s Alaska Native Claims Office, the new withdrawals and reservations resulted in a net increase (over prior withdrawals) of approximately 13 million acres in the amount of Federal land formally closed to hardrock mineral activity.

3. “Public Interest” (d-1) Land

Subsection 17(d)(1) of ANCSA directed the Secretary of the Interior to “review the public lands of Alaska and determine whether any portion of these lands should be withdrawn under authority provided for in existing law to insure that the public interest in these lands is properly protected.” The subsection authorizes him “to classify or reclassify any lands so withdrawn and to open such lands to appropriation under the public land laws in accord with his classifications.”

During 1972, the Secretary withdrew almost all unreserved public land in Alaska.¹⁷³ Most of these so-called “d-1” withdrawals simply backed up other withdrawals, such as the statutory withdrawal for Native selection purposes. Thus, any areas not selected by the Natives or recommended for inclusion in the four conservation systems remain withdrawn under subsection 17(d)(1) despite the termination of the more specific withdrawals. There is no time limit on the d-1 withdrawals.

The d-1 withdrawals generally permit location of only metalliferous minerals under the Mining Law and do not permit mineral leasing. Some of the “backup” d-1 withdrawals, for example those backing up the statutory section 11 withdrawals for Native selection, do not permit any mineral activity. Thus, when the statutory section

¹⁷³ Public Land Orders 5169-5188, 37 F.R. 5572-5591 (1972), as amended by, e.g., Public Land Orders 5250-5257 (September

1972) and Public Land Order 5418, 39 F.R. 11547 (1974)

11 withdrawals terminated in 1975, the approximately 30 million acres of unselected land reverted to a backup d-1 status that did not permit any mineral activity. These 30 million acres are listed in the tables in section C as having been closed to mineral activity in 1975.

The total d-1 acreage in 1975 was calculated by subtracting withdrawals for all other purposes from the total Federal onshore Alaska acreage. The resulting d-1 acreage was 71.4 million acres. Subtraction of the 30 million d-1 acres backing up prior Native selection withdrawals, discussed immediately above, leaves 41.4 million acres considered to be closed to mineral leasing and subject to moderate or slight restrictions on location under the Mining Law (since they remained available for location of metalliferous minerals, and all but one of the essential locatable minerals discussed in appendix A is metalliferous).

4. State Selections

The Alaska Statehood Act, as amended,¹⁷⁴ provided 102,550,000 acres in general grant selections and 800,000 acres of community expansion and recreation selections as grants of land to the new State. An additional 1.1 million acres of mental health facility and school lands were granted prior to statehood and were confirmed by the Statehood Act. The State also owns an estimated 35 million to 45 million acres of submerged land beneath the surrounding territorial sea.¹⁷⁵

Prior to ANCSA'S enactment the State had either selected, received tentative approval for patent to, or received patent to about 26 million acres of land under the Statehood Act.¹⁷⁶ One month after the enactment of ANCSA, during the 90-day withdrawal of all unreserved land accomplished by subsection 17(d)(1) of ANCSA, the State made an attempted selection of its remaining entitlement—approximately 77 million acres. The Secretary of the Interior subsequently withdrew much of this acreage under subsection 17(d)(2) for the mandated four conservation systems study. A compromise eventually resulted in the State retaining 42 million acres of its attempted selection and relinquishing 35 million acres, while Interior transferred 14 million acres out of the subsection 17(d)(2) category and replaced them with other acreage. At the end of 1975, the State had selected a total of 70.1 million acres, of which 15.3 million had been patented to the State and another 13.1 million had been tentatively approved for patent,

A limited amount of the 26 million acres selected by the State prior to ANCSA'S enactment was made available for Native selection under paragraphs 11(a)(2) and 12(a)(1) of ANCSA. It is estimated that 2.6 million of these acres will pass into Native ownership. Therefore, the actual effective total of State selections was 67.5 million acres at the end of 1975. The State's selection of its remaining 37 million acres must await opening of additional desirable land to such selection.

The State has sought to select land with the highest mineral and other resource potential. The State managed to select 68 million acres, or almost two-thirds of its en-

¹⁷⁴ 72 Stat. 339 (1958), as amended, 77 Stat. 223 (1963).
Public Land Statistics, table 4.

¹⁷⁵ H.R. Rep. No. 92-581, 92nd Cong., 1st sess. 39 (1971).

titlement, with a minimum of constraint upon its choice. It owns the Prudhoe Bay oil fields in addition to the submerged land, and it is believed to have selected some of the areas with the greatest hardrock mineral potential. It appears that the State will allow, and even encourage, responsible and orderly development of its mineral resources,

Under section 6(g) of the Alaska Statehood Act, the State may execute conditional leases and make conditional sales of tentatively approved land. The State has allowed some conditional leases to be issued. Furthermore, although land selected but not tentatively approved is legally closed to mineral development under Federal law, the State is allowing mining claims to be located on such land and then relocated under State law when State title has been obtained.¹⁷⁷ A special land use permit is required for the use of heavy equipment, including heavy mining equipment, on State land.

The 15.3 million acres already patented to the State at the end of 1975 were no longer Federal land and ordinarily should not be included in the accounting of Federal land in this appendix. However, since the published BLM land statistics, which were the basis for the total Federal acreage data used in this appendix, showed only 13 million acres of non-Federal land in Alaska in 1975,¹⁷⁸ of which 1 million acres were privately owned, only 12 million of the 15.3 million State-owned acres were treated as non-Federal; the remaining 3.3 million patented acres were treated as if they were still Federal land subject to tentatively approved State selections. Thus, there were (for our purposes) 55.5 million acres of Federal land subject to State selections that had not yet been patented. Of these selected but unpatented lands, 16.4 million acres had been tentatively approved and 39.1 million acres were unapproved.

All 55.5 million acres of State selected land are listed in tables B.2 and B.3 as having been open with moderate or slight restrictions for location of hardrock minerals under State law in 1975. The 16.4 million acres of tentatively approved State selections are listed in table B.1 as having been open to mineral leasing for the fossil fuel and fertilizer minerals under State law, while the 39.1 million acres of selected but unapproved land are listed as having been closed.

¹⁷⁷ Alaska Adm. Code § 86.115 (1974).

¹⁷⁸ Public Land Statistics, table 7.