

**Federal Land Planning and
Environmental Laws**

Chapter 6.- FEDERAL LAND PLANNING AND ENVIRONMENTAL LAWS

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Federal Land Planning and Environmental Laws

NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

The passage of the National Environmental Policy Act of 1969¹ (NEPA) marked the beginning of a new era of increased Federal concern for environmental quality. The Act set forth general Federal environmental policy goals, made environmental quality the concern of all Federal agencies, and by instituting certain “action-forcing mechanisms,” fundamentally altered the Federal decision-making process. The most important action-forcing mechanism is the requirement that an environmental impact statement (EIS) be prepared for “major Federal actions significantly affecting the quality of the human environment.

Unlike environmental laws such as the Clean Air Act, NEPA does not establish any specific Federal environmental standards.³ It does require Federal departments and agencies in implementing their policies and programs to use all practical means to improve and coordinate agency plans, functions, programs, and resources in order to protect and preserve the environment. While NEPA imposes no direct specific restraints on access to non-Federal minerals, it nevertheless has a substantial indirect influence, since Federal land management agencies must comply with NEPA in the administration of all program re-

sponsibilities. The agencies have developed administrative procedures for the consideration of applications for rights-of-way and other permits for the use of Federal lands that involve a thorough environmental impact review process. Land management agency regulations provide that applicants for rights-of-way and other permits may be required to pay the costs of preparing an EIS.⁴

There are three major components to the Act: the declaration of broad national policy goals; the enumeration of specific actions to be implemented by Federal agencies; and the establishment of the Council on Environmental Quality (CEQ) in the Executive Office of the President, to coordinate agency implementations and to formulate and recommend national environmental policy.

BROAD POLICY GOALS OF NEPA

Section 101(a) of NEPA provides “that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations . . . to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Amer-

¹Note: Footnotes for this section appear on pp. 150-152.

icans.”⁵ This broad policy is to be carried out as “the continuing responsibility of the Federal Government” through means “consistent with other essential consideration of national policy.”⁶ This policy was further modified by the express statement that the “goals and policies” set forth in NEPA “are supplementary to those set forth in existing authorizations of Federal agencies.”⁷ Within these constraints, agencies are to use all practicable means so that the Nation can:⁸

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
5. Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life’s amenities; and
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

MANDATORY AGENCY ACTION

To further the broad environmental policy established in NEPA, Congress directed that, “to the fullest extent possible the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act.”⁹ Congress also mandated that all Federal agencies utilize a review process that

assures consideration of environmental values in their policy planning and decisionmaking.¹⁰ The EIS was established as part of the basic decisionmaking apparatus of the Federal departments and agencies. While accomplishment of the broad environmental policies and goals proclaimed in NEPA is secondary to other agency program authorities and responsibilities, the requirements of the EIS process are direct and mandatory.

All Federal agencies in the conduct of their functions, programs, planning, and policies are required by NEPA to:

- a. Utilize a “systematic interdisciplinary approach” integrating natural and social sciences and environmental design arts in planning and decisionmaking.¹¹
- b. Develop means of ensuring that presently unquantified environmental amenities and values will be given appropriate consideration in decisionmaking along with economic and technical considerations.¹²
- c. Include a detailed EIS in “every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.” When preparing an EIS, the responsible agency must consult with other Federal agencies and solicit and include views of those agencies as well as State and local agencies. The statement must be made available to the President, to CEQ, and to the public and it must accompany the proposal through the existing agency review process.¹³
- d. Study and describe “appropriate alternatives to recommended courses of action” for any proposal that involves unresolved conflicts concerning alternative uses of available resources.¹⁴
- e. Lend support to programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind’s world en-

vironment, where consistent with U.S. foreign policy.¹⁵

- f. Make available to State and local governments and the public, information and advice useful in restoring, maintaining, and enhancing environmental quality.¹⁶
- g. Initiate and utilize ecological information in planning and developing resource-oriented projects.¹⁷
- h. Assist CEQ.¹⁸

NEPA requires Federal agencies to consider environmental factors, along with traditional technical and economic factors, in the planning process. Case-by-case analysis of proposed agency actions ensures that environmental consequences are considered before action is taken.

The action-forcing mechanisms impose operational duties that compel agencies to consider and implement the general purposes of the Act. By requiring that agencies prepare a detailed environmental statement, conduct systematic and interdisciplinary review, and consult with other agencies and seek public comment on proposed actions, these action-forcing mechanisms have changed the channels and processes of administrative planning, decision, and review. They open the decisionmaking process to the full spectrum of agencies and individuals that might be affected by the proposed actions. Public participation ensures that all issues and competing considerations are aired and balanced.

THE COUNCIL ON ENVIRONMENTAL QUALITY

The Council on Environmental Quality was established within the Executive Office of the President by Title II of NEPA.¹⁹ The CEQ is composed of three members appointed by the President with Senate approval. It serves as a resource, research, and advisory body to the President on environmental matters. The Of-

fice of Environmental Quality in the Executive Office of the President was established by the Environmental Quality Act of 1970²⁰ to provide professional and administrative support for the CEQ.

Under an executive order,²¹ the President has assigned CEQ the responsibility to issue guidelines for the preparation of environmental statements required by section 102(2)(c) of NEPA.²²

These CEQ guidelines are implemented by the specific guidelines and regulations pertaining to compliance with NEPA that have been adopted by individual Federal agencies. The courts have held that "because CEQ does not have the statutory authority to prescribe regulations governing compliance with NEPA, CEQ guidelines are merely advisory."²³ The standard for judicial review of whether agency actions satisfy NEPA requirements is whether the actions comply with the agency's own regulations and the requirements of section 102(2)(c).

WHEN AN EIS IS REQUIRED

The preparation of an EIS is only required for a Federal action that the agency determines is "a major Federal action significantly affecting the human environment."²⁴ The identification of major actions that significantly affect the quality of the human environment is the responsibility of each Federal agency and is to be carried out against the background of its own particular operations.

NEPA requires a case-by-case determination of whether a given agency action requires preparation of an EIS. The initial inquiry must ascertain whether the proposed action is a "major Federal action significantly affecting the human environment." If so, the impact assessment process is begun. This involves consideration of the environmental consequences of the proposed action. The words "major" and "significantly" are intended to imply a degree of importance and impact that must be met before a statement is required.²⁵

“Major Federal actions” include not only actions directly undertaken by Federal agencies, but also Federal decisions to approve, fund, or license activities that will be carried out by others. CEQ guidelines provide that Federal “actions” include but are not limited to:

1. Recommendations or reports relating to or leading to legislation and appropriations;
2. Projects and continuing activities
 - Directly undertaken by Federal agencies; or
 - Supported in whole or in part through Federal contracts, grants, subsidies, loans, or other forms of funding assistance; or
 - Involving a Federal lease, permit, license, certificate, or other entitlement for use; and
3. The making, modification, or establishment of regulations, rules, procedure, and policy.²⁶

There must be sufficient Federal control and responsibility over the action that causes the impact for it to constitute a Federal action. Such Federal control and responsibility are not present in cases such as the distribution of general revenue-sharing funds to States and localities.²⁷ In determining whether or not an EIS is required, CEQ guidelines direct agencies to view the cumulative impacts of the proposed action and of further actions contemplated. The guidelines advise that an EIS be prepared in all instances where a “cumulatively significant” impact on the environment may reasonably be expected from the Federal action, or where the proposed action is expected to generate “highly controversial” environmental impacts.²⁸

Finally, the action must be one that significantly affects the quality of the human environment either by directly affecting human beings or by indirectly affecting them through adverse effects on the environment. Such adverse significant effects include those that degrade the quality of the environment, cur-

tail the range of its beneficial uses, and serve short-term environmental goals to the disadvantage of long-term ones.²⁹

There has been extensive litigation on the question of whether particular actions are major actions that significantly affect the human environment. It is difficult to specify which actions will invoke the application of NEPA. The courts have generally interpreted the term “major action,” liberally.³⁰

As originally written, NEPA applied to all Federal agencies. However, Congress and the courts have established a number of exceptions to this mandate. Congress has exempted the Environmental Protection Agency (EPA) from the requirements of NEPA when it is taking action under the Clean Air Act,³¹ and when it is issuing pollution discharge permits (except those for new sources) under the Federal Water Pollution Control Act Amendments of 1972.³² The courts have ruled that EPA was not required to prepare a NEPA statement for an action under the Federal Insecticide, Fungicide, and Rodenticide Act³³ where the procedures the agency followed were the functional equivalent of the NEPA process.³⁴ EPA has generally contended that it is exempt from NEPA on the grounds that the Act is aimed at development agencies and not at environmental protection agencies.³⁵

WHEN AN EIS MUST BE PREPARED

The courts have frequently addressed the question of when, during the decisionmaking process, an EIS must be prepared. The decisions have generally held that the EIS must be prepared at the earliest practical point in time.³⁶ One court stated that, ideally, an EIS should be prepared late enough in the development process to contain meaningful information, but early enough so that this information can practically serve as an input in the decisionmaking process.³⁷ Early preparation is deemed essential to assure that the comprehensive review and objective analysis intended by the Act will be responsibly carried out. If preparation of the EIS were al-

lowed to take place after planning was well underway, desirable alternatives might already be foreclosed, a fully objective analysis would not be possible, and opportunities to make alterations that minimize environmental costs would be lost.

The draft EIS is the vehicle by which the requirement for early public notice is met. The CEQ guidelines state the necessity for the earliest possible preparation:

Agencies should keep in mind that such statements are to serve as the means of assessing the environmental impact of proposed agency action, rather than as a justification for decisions already made. This means that draft statements on administrative actions should be prepared and circulated for comment prior to the first significant point of decision in the agency review process.³⁸

But preparation of the draft is not the first step in the environmental review process. Under the present system, an agency first makes an assessment of a proposed action to determine whether or not an EIS is required. If an agency decides that an EIS is required, it often publishes a notice of its intent to prepare one in the Federal Register. If more than one agency is directly involved in the proposed action, the agencies may select a "lead agency" to assume supervisory responsibility in the preparation of the EIS. If an agency decides that a proposed action is not a major action that will have sufficient significant impact on the quality of the human environment to require the processing of an EIS, it would issue a "negative declaration."³⁹ Negative declarations are generally not issued as formal documents or published in the Federal Register.

The agency then prepares a draft EIS on the proposed action. The draft statement must fulfill and satisfy, to the fullest extent possible, the requirements of a final EIS as set out in section 102(2)(c), as well as the agency's own regulations on the preparation of an EIS. CEQ guidelines provide that a draft EIS⁴⁰ should contain a "detailed" description of:

1. The proposed action, its purposes, and a description of the affected environment;
2. The probable environmental impacts of the proposed action including positive and negative, primary and secondary, and direct and indirect consequences of the action;
3. Any probable unavoidable adverse environmental effects from the implementation of the proposal;
4. Possible alternatives to the proposed action, including the abandonment or postponement of the proposal, as well as any possible alternatives that may be within the jurisdiction of another agency; and an evaluation of the benefits and environmental impacts of each alternative;
5. The relationship between local short-term uses of the environment and enhancement of long-term productivity including an analysis of any tradeoffs and losses associated with the proposed action, and also the extent to which further alternative uses may be foreclosed. (Both short- and long-term uses must be considered in assessing the environmentally significant consequences of a proposed action.);
6. Any irreversible and irretrievable commitments of resources that would be involved in implementation, and the extent to which the proposal curtails the range of potential uses of the environment;
7. The relationship of the proposed action to Federal, State, or local land use plans, policies, and controls for the affected area (such as those prepared under the Clean Air Act, Clean Water Act, or Federal land management laws), and a statement of how the agency has reconciled any conflict with such plans, or the reasons for proceeding with the proposed action despite the conflict; and
8. Other Federal policy interests and considerations that offset or mitigate the adverse environmental consequences of the proposed action.

Each EIS should be prepared in accordance with the statutory directive that agencies “utilize a systematic, interdisciplinary approach which will insure the integrated use of natural and social sciences and environmental design arts in planning any decision which may have an impact on man’s environment.”⁴¹

PUBLIC PARTICIPATION

The EIS is a public disclosure document. As such, it is intended to provide a full and candid presentation of the environmental factors along with other pertinent information on proposed Federal actions. The EIS is a tool to aid in the decision process. It acts to ensure that the environmental consequences and all possible alternative approaches to a particular project, including its abandonment, are considered before action is taken. An EIS must be presented clearly enough to be understood by an informed layman, yet it must contain sufficiently detailed data to provide technical information for interpretation by specialists.

By compelling a formal, detailed statement of the anticipated environmental impacts and a description of alternatives, NEPA provides evidence that the mandated decisionmaking process has, in fact, taken place; and, most importantly, allows those removed from the initial process to evaluate and balance the factors on their own.⁴²

Federal agencies must take full responsibility for the preparation of an EIS. They cannot simply accept documentation from an applicant for a permit, license, grant, or other Federal aid. Statements and environmental information submitted by applicants must be independently evaluated. The responsibility for the impact evaluation, scope, and content of the draft and final statements rests with the agency. Public Law 94-83⁴³ amended NEPA to provide that if certain conditions are satisfied, an agency may delegate EIS preparation to a State agency or to an official for a major Federal action funded

under a program of grants to States (primarily Federal-aid highways). There must be a specified level of Federal participation and guidance in the impact assessment process, an independent evaluation of the EIS prior to approval and adoption by the agency, notification of any other States or Federal land management entities that could be affected by the proposed action or alternative, and a written statement of any disagreements about the impacts described in the EIS. The chief effects of the amendment are to validate the policy of the Federal Highway Administration that requires States to prepare EISs for Federal-aid highway projects, and to overturn Federal court decisions that State-prepared EISs were legally insufficient under NEPA.

Once a draft statement is prepared, it is circulated for review and comment from the public and from those Federal, State, and local agencies that have expertise or jurisdiction relevant to the action under consideration.⁴⁴ A period of 90 days is usually allowed for comment. Notice of the availability of the draft EIS is published in the Federal Register and may also appear in local newspapers. A public hearing may be held on a draft EIS, but this usually occurs only when a hearing on the proposed action is required under other statutes or existing agency procedures.

By requiring an agency to seek out the views of appropriate Federal, State, and local officials and of the public, NEPA opens the decisionmaking process to those who may be affected by the action. This ensures that issues, competing considerations, and environmental consequences, which might otherwise be overlooked or ignored by agency officials, will be aired and given due consideration. Public comment on a draft EIS not only must be sought out but also must be weighed by the agency in preparing the final version of the EIS. The final EIS must be responsive to the issues and questions raised by Government agencies and the public.

One case interpreting this requirement held that:

... officials must give more than cursory consideration to the suggestions and comments of the public in the preparation of the final impact statement. The proper response to comments which are both relevant and reasonable is to either conduct the research necessary to provide satisfactory answers, or to refer to those places in the impact statement which provide them. If the final impact statement fails substantially to do so, it will not meet the statutory requirements.⁴⁵

After a complete consideration of all comments and any additional information received, the agency then prepares a final EIS. This accompanies the proposal for action through the decisionmaking process, which varies enormously from agency to agency. The final EIS contains, in addition to the required sections described in the discussion of the draft EIS, a description of coordination with other agencies, responses to issues and questions raised in the draft review process, and identification of any unresolved issues.⁴⁶

NEPA AND JUDICIAL REVIEW

Agency compliance with the requirements established by NEPA is subject to judicial scrutiny. Although the Act does not contain a provision specifically authorizing judicial review or enumerating judicial remedies, the courts have uniformly held that injunctive relief will be granted to plaintiffs who demonstrate that the requirements of the Act have not been met. A leading case states:⁴⁷

Injunction is the vehicle through which the congressional policy behind this chapter can be effectuated, and a violation of this section in itself may constitute a sufficient demonstration of irreparable harm to entitle a plaintiff to blanket injunctive relief.

In addition, defects in the environmental impact process may be used as the basis for a challenge to agency action—implementation of the proposal discussed in the EIS—under the Administrative Procedure Act.⁴⁸ That Act provides authority to set aside any agency action that is arbitrary, capricious, an abuse of

discretion, or otherwise not in accordance with the law.

The Scope of Review

The mere preparation of a document discussing environmental impacts is not sufficient to render agency action immune to judicial review. The courts will look both at the contents of the document and at the use to which it is put. In *Calvert Cliffs' Coordinating Committee, Inc. v. AEC*, the court of appeals rejected the notion that the preparation of a document which accompanied agency files through the decisionmaking process, but which was in no way used in that process, would be sufficient.⁴⁹

In the *Gillham Dam* case,⁵⁰ it was held that “at the very least, NEPA is an environmental full-disclosure law.” On appeal, the Eighth Circuit found it “clear that the Act is more than an environmental full-disclosure law,” and that it was “intended to effect substantive changes in decisionmaking.”⁵¹

There has been considerable litigation concerning the compliance with the procedural requirements that section 102 places on agencies. Almost without exception, the courts have held that agencies are required to make the fullest effort possible to comply with section 102 in every detail. The definition of “major Federal action” is expansive.⁵² Agencies have been required to begin preparation of the statement early in the decisionmaking process.⁵³ Responsibility for preparation and review is placed squarely on the Federal agency, not on other interested parties.⁵⁴ Extensive discussion of the environmental costs,⁵⁵ the environmental impacts,⁵⁶ and the possible alternatives has been required.⁵⁷

The development of case law relating to the substantive review of statements, or agency actions based on statements, has been less complete. The term substantive review has two differing, but closely related, meanings in NEPA cases. It can refer to the action of a court in assessing, on its own, the validity of an EIS and the conclusions contained therein. It can also refer to judicial review based on

the premise that NEPA, particularly section 101, imposes substantive requirements on an agency that go beyond the procedural requirements of section 102. In practice the two have gone together.

In *Calvert Cliffs*,⁵⁸ the court indicated a willingness to reverse an agency decision involving a procedurally correct EIS if it could be shown that “the actual balance of costs and benefits struck was arbitrary or clearly gave insufficient weight to environmental factors.”⁵⁸ In another early NEPA case, the impact statement was held inadequate because it consisted “almost entirely of unsupported conclusions.”⁵⁹ However, diametrically opposite views have also been indicated by some courts:⁶⁰

Judicial review of the final environmental statement was limited to whether all five procedural requirements of this section [section 102] were met, whether it constituted obvious good faith compliance with the demands of this section, and whether it contained a reasonable discussion of the subject matter involved in the five required areas.

While there has been no final disposition of this conflict by the Supreme Court, five circuit courts of appeals⁶¹ have adopted a midway position. They found that section 101 of NEPA does impose substantive requirements on an agency and allows judicial review of whether those substantive requirements have been met. However, that review is limited to the traditional standards of determining whether the administrative action was “arbitrary, capricious, or an abuse of discretion.” This position has been expressed as follows:

In determining whether the substantive requirement of this section has been met, the reviewing court must first determine whether the agency acted within the scope of its authority, and next whether the decision reached was arbitrary, capricious, or otherwise not in accordance with law; in making the latter determination, the court must decide if the agency failed to consider all relevant factors in reaching its decision or if the decision itself represented a clear error of judgment.⁶²

Another court described the judicial function in these words:

The court’s role under this section is not only to see that agencies have complied with all procedural requirements but also to engage in substantial inquiry to determine whether there has been a clear error of judgment; courts may delve into a decisionmaking process to determine if the decision was arbitrary and capricious when viewed in terms of the data and information supplied and set forth in the environmental impact statement.⁶³

These decisions indicate that NEPA is to be more than an exercise in collecting information. Final agency decisions cannot be made in disregard of the information that is contained or should be contained in the impact statement.

Judicial Review and Delay

The EIS process and judicial review of agency compliance with NEPA have been cited as causing substantial delays in the Federal approval of mining-related applications, such as securing a right-of-way over Federal lands. It is claimed that the time spent in complying with NEPA adds to the cost of mining operations.

One industry spokesman⁶⁴ has estimated that the time involved in obtaining all environmental permits, where no Federal right-of-way is sought, is 60 to 90 days, at a minimum (figure 6). If a right-of-way across Federal lands is involved, he estimated that 36 to 44 months are required (figure 7).⁶⁵ These figures do not include any estimate of the time involved if the matter is subject to judicial review.

In 1976, CEQ published an analysis of Federal agency experience under NEPA.⁶⁶ CEQ surveyed 70 Federal agencies to determine the amount of time they took to prepare an EIS and the extent of NEPA litigation. (For Federal land management agencies, the results are shown in tables 5 and 6.)

The CEQ report observed:⁶⁷

There are three points in the EIS process when delays can occur—in preparing the

Figure 6.—Time Required to Get Environmental Permits if Proponent Owns the Site and No Federal Rights-of-Way Are Involved

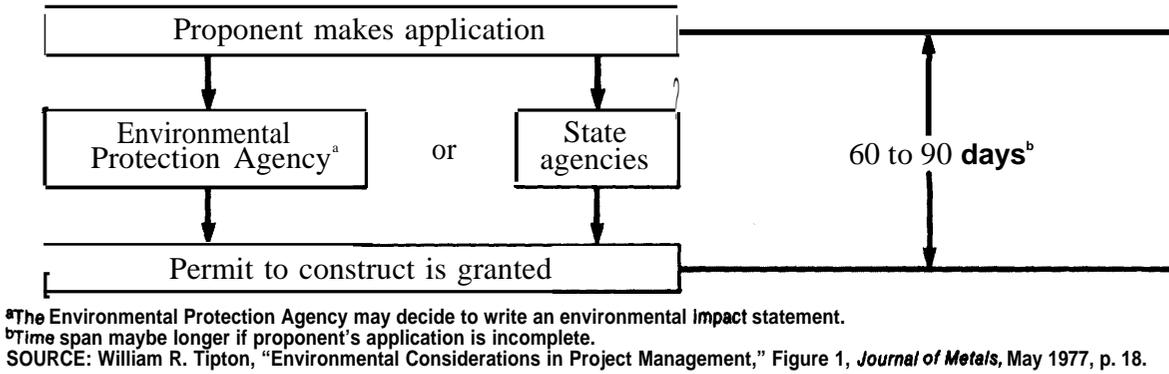
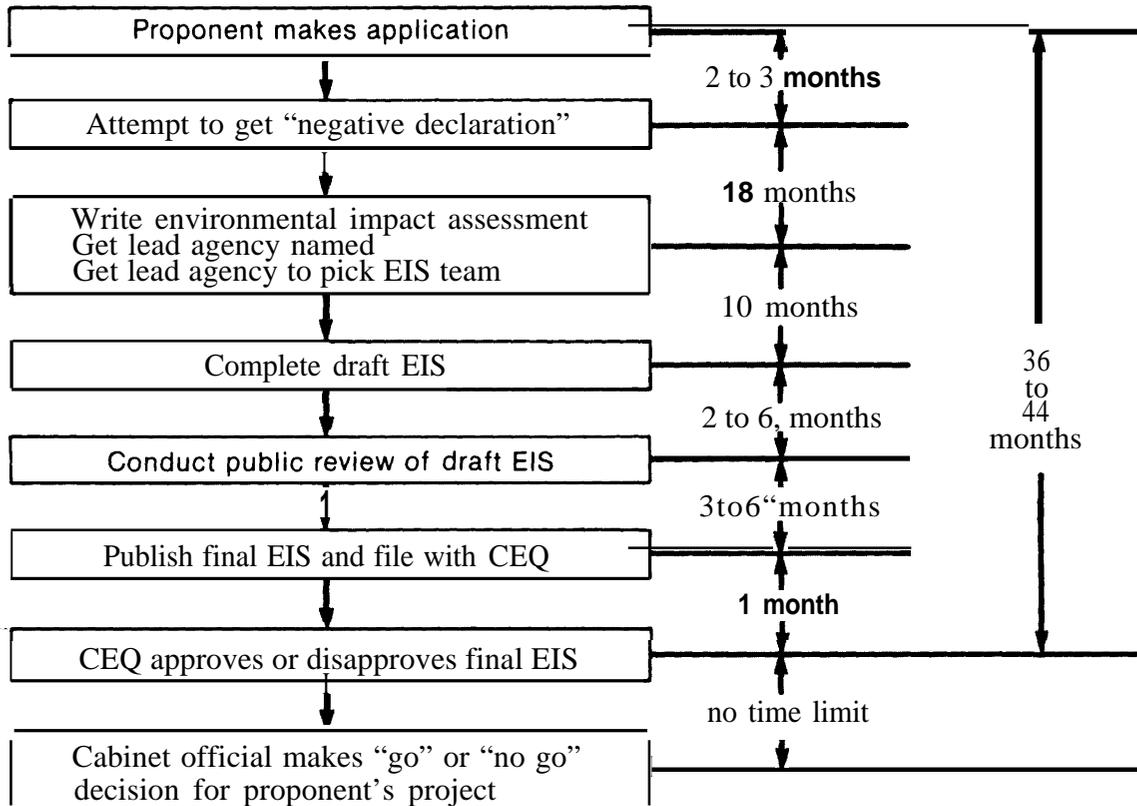


Figure 7.—Time Required to Get Environmental Permits if Federal Lands Are Involved



SOURCE: William R. Tipton, "Environmental Considerations in Project Management," Figure 2, *Journal of Metals*, May 1977, p. 19.

draft, in preparing the final after comments are in, and after issuance of the final. The time required to prepare a draft EIS differs from agency to agency and from project to project. The scope of a project, the experience of the people preparing the statement, the relationship of the EIS process to the decisionmaking process, and the priority accorded by the agency management to the statement and the project itself are all critical.

CEQ concluded in its annual report that, "There were substantial problems of delay in the early years of NEPA, but that they are diminishing as agencies improve their environmental expertise and begin impact statement preparation earlier in their planning and decisionmaking process."⁶⁸ It was recognized that there is a trend toward shorter times for preparation of draft and final EISs.

CEQ's most recent survey of agency experience with NEPA litigation puts some

Table 5.—Time Required for Draft EIS Preparation, Fiscal Year 1975 (in months)

	Minimum	Maximum	Average
Agriculture			
Forest Service	1	24	13
Interior			
Bureau of Land Management	2	38	20
Fish and Wildlife Service	3	12	8
National Park Service	12	24	14

Average Time Between Filing of Draft and Final EISs, Calendar Year 1974 (in months)

Agriculture	
Forest Service	9.1
Interior	
Bureau of Land Management	5.7
Fish and Wildlife Service	19.8
National Park Service	13.0

SOURCE: CEQ, *Environmental Impact Statements: An Analysis of Six Years Experience by Seventy Federal Agencies, 1976*, at 29-30.

Table 6.—National Environmental Policy Act Litigation

Agency	Cases alleging Cases EIS ^a needed	Cases dismissed	Cases dismissed no EIS needed	Cases dismissed alleging inadequate EIS	Injunction issued no EIS prepared	Injunction inadequate EIS	permanent injunction	
<i>Cases (as of June 30, 1976) completed</i>								
Agriculture								
Forest Service	31	24	11	9	2	5	1	0
Interior								
Bureau of Land Management	11	5	1	3	1	0	0	0
Fish and Wildlife Service	4	3	0	0	0	0	0	0*
National Park Service	7	6	0	0	0	2	1	0
All Federal agencies (total).	527 ^c	350	155	96	55	60	45	0
<i>Cases (as of June 30, 1976) pending</i>								
Agriculture								
Forest Service	23	13	0	0	0	3	3	0
Interior								
Bureau of Land Management	19	13	0	4	0	0	2	0
Fish and Wildlife Service	2	2	0	0	0	0	0	0
National Park Service	8	5	0	0	0	2	0	0
All Federal agencies (total).	399 ^d	229	13	14	13	45	40	0

^aEnvironmental impact statements

^bInjunctions which permanently halted the project

^cRepresents 444 actual cases. The difference of 83 represents cases brought against more than one agency.

^dThis figure represents 339 actual cases. The difference of 60 represents cases brought against more than one agency.

SOURCE: CEQ, *Environmental Quality 1977 Eighth Annual Report*, pp. 125-128.

perspective on problems stemming from delay associated with NEPA.⁶⁹ Since the enactment of NEPA,⁷⁰ CEQ found that 7,334 EISs had been filed and that there had been a total of 783 suits filed against Federal agencies alleging a violation of NEPA. In 479 cases, plaintiffs sought preparation of an EIS; in 288 cases, the adequacy of an EIS was challenged.

In the 6½ years covered, injunctions had been granted in 177 cases. In 547 cases that reached the courts, no injunctions were ordered. Of the 177 injunctions, 75 have lasted longer than 1 year (see table 7). CEQ characterizes delays caused by NEPA-related injunctions as follows:⁷¹

This figure is less than 3 percent of the 7,334 actions for which impact statements were prepared and a much smaller proportion of the unknown-but very large—number of assessments made. . . . In no cases were actions stopped permanently solely because of a NEPA injunction. Although in a particular case, an injunction might cause considerable delay, the delays caused by NEPA injunctions are small when viewed against the whole spectrum of Federal activity.

Table 7.—Injunctive Delays of Federal Actions Under the National Environmental Policy Act (NEPA)

Injunctive action	Projects involved
Delayed by NEPA-related injunctions	
Up to 3 months	32
3 to 6 months	18
6 to 12 months	22
Over 12 months	75
Length of delay not indicated. . .	30
TOTAL	177
Permanently halted by NEPA-related injunctions	0
Delayed by non-NEPA-related injunctions	20
No injunctions	547
Injunction status not indicated.	39
TOTAL	783

CEQ identified 42 projects that were stopped after a NEPA challenge was brought (see table 8).⁷²

Table 8.—Projects Canceled as a Result of National Environmental Policy Act (NEPA) Injunctions

Reason	Projects canceled
Local/State decision to halt a project involving Federal funds.	12
Federal decision to halt a project.	9
Part of a settlement agreement	6
Applicant withdrew	4
Injunction granted under another law	2
Congressional action.	2
Local/State decision to proceed without Federal funds⁷	2
Judicial interpretation of another law	1
Deference to congressional desires	1
Presidential decision to halt a project.	1
Local land use conflicts	1
Not indicated	1
TOTAL	42

⁷These two projects were continued on the local or State level, only the Federal funding was canceled
 SOURCE CEQ, *Environmental Quality—1977, Eighth Annual Report*, p 29

The CEQ survey does show that NEPA litigation delays are not as widespread as may sometimes be alleged. However, the small number of injunctions could be misleading. In some cases, settlements or agreements by a defendant agency may have the same delay-ing effect as an injunction (even though it is a delay that is justified under terms of the statute). Also, the small number of injunctions may not accurately reflect the number of individuals affected. NEPA actions involving broad agency programs such as the Federal coal leasing program, the Outer Continental Shelf leasing program, nuclear fuel reprocessing, and western grazing practices have affected hundreds, perhaps thousands, of applicants and potential applicants for Federal licenses and permits.⁷³

What the CEQ data indicate clearly is that most NEPA challenges are and can be resolved in a reasonable period of time.

FOOTNOTE REFERENCES FOR NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

¹Public Law 91-190, 83 Stat. 852, Jan. 1, 1970, as amended by Public Law 94-83, 89 Stat. 424, Aug. 9, 1975, 42 U.S.C. 4321-4347.

²42 U.S.C. 4332(2)(C). See *Calvert Cliffs' Coordinating Committee, Inc. v. U.S. Atomic Energy Commission*, 449 F.2d 1109 (D.C. Cir. 1971), cert. denied, 404 U.S. 942, for a discussion of the legislative history and intended effect of the requirement for an environmental impact statement. See also, Richard N. L. Andrews, "Impact Statements and Impact Assessment," in *Environmental Impact Assessment* (Marian Blisset, cd.), Engineering Foundation, 1975, at pp. 16-18.

³However, five circuit courts of appeals have explicitly adopted the position that NEPA imposes some substantive requirements on Federal agencies: *EDF v. Corps of Engineers*, 492 F.2d 1123 (5th Cir. 1974); *Conservation Council v. Froehle*, 473 F.2d 664 (4th Cir. 1973); *Sierra Club v. Froehle*, 486 F.2d 946 (7th Cir. 1973); *EDF v. Corps of Engineers*, 470 F.2d 289 (8th Cir. 1972); and *Calvert Cliffs' Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109 (D.C. Cir. 1971).

In *Calvert Cliffs*, the court stated its role in reviewing both procedural and substantive aspects of an agency decision:

The reviewing courts probably cannot reverse a substantive provision on its merits, under section 101, unless it be shown that the actual balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental values. But if the decision was reached procedurally without individualized consideration and balancing of environmental factors—conducted fully and in good faith—it is the responsibility of the courts to reverse.

⁴See section 304(b) of the Federal Land Policy and Management Act of 1976, Public Law 94-579, 90 Stat. 2765, 43 U.S.C. 1734(b), which applies to the public lands and the national forests. See also, the regulations for the National Park Service and the Bureau of Land Management at 43 CFR 2802.1-2(a) (I); and for the Fish and Wildlife Service at 50 CFR 29. 21-22(a).

⁵42 U.S.C. 4331(a).

⁶Id.

⁷Section 105, 42 U.S.C. 4335.

⁸Section 101(b), 42 U.S.C. 4331(b).

⁹Section 102(1), 42 U.S.C. 4332(1).

¹⁰Section 102(2)(A), 42 U.S.C. 4332(2)(A).

¹¹Id.

¹²Section 102(2)(B), 42 U.S.C. 4332(2)(B).

¹³Section 102(2)(C), 42 U.S.C. 4332(2)(C).

¹⁴Section 102(2)(E), 42 U.S.C. 4332(E). This section was originally section 102(2)(D) and is so referred to in many court cases on NEPA; however, Public Law 94-83 added a new subparagraph (2)(D) and redesignated subparagraphs (D) to (H) as (E) to (I) respectively.

¹⁵Section 102(2)(F), 42 U.S.C. 4332(2)(F).

¹⁶Section 102(2)(G), 42 U.S.C. 4332(2)(G).

¹⁷Section 102(2)(H), 42 U.S.C. 4332(2)(H).

¹⁸Section 102(2)(I), 42 U.S.C. 4332(2)(I).

¹⁹Public Law 91-190, Title H, section 202, 83 Stat. 854, 43 U.S.C. 4342.

²⁰Public Law 91-224, 84 Stat. 114, Apr. 3, 1970, 42 U.S.C. 4372-4374.

²¹E.O. 11514, 35 F.R. 4247, Mar. 5, 1970.

²²CEQ guidelines are at 40 CFR 1500.

²³*Greene County v. FPC*, 455 F.2d 12 (2d Cir. 1972).

²⁴42 U.S.C. 4332(2)(C).

²⁵40 CFR 1500.6(c).

²⁶40 CFR 1500.5.

²⁷40 CFR 1500.6(c).

²⁸40 CFR 1500.6(a).

²⁹40 CFR 1500.6(b).

³⁰Courts have found some of the following to be "major actions:" a Federal loan guarantee for a 16-story building, *Goose Hollow Foothills League v. Romney*, 334 F. Supp. 877 (D. Ore. 1971); approval of a branch bank location, *Billings v. Camp*, 4 E.R.C. 1744 (D.D.C. 1972);

³¹15 U.S.C. 793(c)(1).

³²33 U.S.C. 1371(c)(1).

³³7 U.S.C. 135 et seq.

³⁴*EDF v. EPA*, 489 F.2d 1247 (D.C. Cir. 1973).

³⁵The original CEQ guidelines for EIS preparation also adopted this interpretation: "Because of (NEPA's) legislative history, environmentally protective regulatory actions concurred in or taken by the EPA are not deemed actions which require preparation of an EIS under section 102(2)(c) of the Act." Section 5(d), 36 F.R. 7724, Apr. 23, 1971.

³⁶See *Calvert Cliffs' Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109 (D.C. Cir. 1971); *National Resources Defense Council v. Morton*, 458 F.2d 827 (D.C. Cir. 1972); *Scientists' Institute for Public Information v. AEC*, 481 F.2d 1079 (D.C. Cir. 1973).

³⁷*Scientists' Institute for Public Information v. AEC*, 481 F.2d 1079 (D.C. Cir. 1973).

³⁸40 CFR 1500.7(d)(2).

³⁹The CEQ guidelines say little about negative declarations, concentrating rather on the requirements for finding the existence of a major action. Agencies are required to notify CEQ when they have made a negative declaration for a proposed action (i) which is of the sort that the agency has previously identified as generally requiring an EIS, (ii) which is similar to actions for which it has prepared a significant number of statements, or (iii) which the agency has previously announced would be the subject of an EIS, or concerning which the agency had received a request from CEQ to prepare a statement. The agency is also required to prepare a publicly available record briefly setting forth the determination and explaining it. CEQ will periodically publish in the *Federal Register* a list of such declarations. 40 CFR 1500.6(e).

⁴⁰The requirement that a draft EIS “fulfill and satisfy to the fullest extent possible at the time the draft is prepared the requirements established for final statements by section 102(2)(c)” is found at 40 CFR 15.00.7(a). Specific requirements for the contents of any EIS are found at 40 CFR 1500.8.

⁴¹Section 102(2)(A), 42 U.S.C. 4332(2)(A).

⁴²*Calvert Cliffs’ Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109 at (D.C. Cir. 1971).

⁴³Public Law 94-83, 89 Stat. 424, Aug. 9, 1975.

⁴⁴CEQ provides a list of “Areas of environmental impact and Federal agencies and Federal-State agencies with jurisdiction by law or special expertise to comment thereon” in appendix I to 40 CFR part 1500. Procedures for soliciting comments from State and local agencies are governed by OMB Circular No. A-95, see appendix IV to 40 CFR part 1500.

⁴⁵*Lathan v. Volpe*, 350 F. Supp. 262, at 265 (W.D. Wash. 1972).

⁴⁶40 CFR 1500. IO(a).

⁴⁷*EDF v. Froehle*, 477 F.2d. 1033 (8th Cir. 1973).

However, while courts have held that injunctive relief is appropriate under NEPA, they have applied the traditional tests that apply in all civil cases to applications for injunctions. Plaintiffs seeking injunctive relief must show (1) that they are likely to prevail on the merits; (2) that they will suffer irreparable damage if the injunction is not issued; and (3) that the public interest supports granting the injunction. See *Conservation Council of North Carolina v. Costanzo*, 528 F.2d. 250 (4th Cir. 1974); *EDF v. Armstrong*, 352 F. Supp. 50 (D. Col. 1972), supplemented, 356 F. Supp. 131, aff’d, 487 F.2d. 814, cert. denied, 416 U.S. 974, rehearing denied, 419 U.S. 1041.

⁴⁸Codified at 5 U.S.C. 551-59, 701-06, 1305, 3105, 3344, 6362, 7562.

⁴⁹*Calvert Cliffs’ Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109 (D.C. Cir. 1971).

⁵⁰*Environmental Defense Fund v. Corps of Engineers*, 325 F. Supp. 749 (E.D. Ark. 1971).

⁵¹*Environmental Defense Fund v. Corps of Engineers*, 470 F.2d 289, (8th Cir. 1972).

⁵²“This section was designed to cover almost every form of Federal activity.” *Chelsea Neighborhood Associations v. U.S. Postal Service*, 516 F.2d 378 (2d Cir. 1975). See also, *Union Mechling v. U. S.*, 390 F. Supp. 391 (D. Pa. 1971) and *Hardy v. Mitchell*, 460 F.2d 640 (2d Cir. 1972).

⁵³“Federal officials are entitled to “dream out loud” without filing an impact statement; however, a statement is required when a proposal moves beyond the “dream” stage into some form of tangible response.” *Sierra Club v. Morton*, 514 F.2d 856 (D.C. Cir. 1975), rev’d on other grounds, 427 U.S. 390. “Environmental impact statement should be prepared at the earliest time prior to implementation of proposed major Federal action, so that alternative courses of action with less severe environmental consequences can be considered.” *Friends of the Earth v. Coleman*, 518 F.2d. 323 (9th Cir. 1975).

⁵⁴“This section does not permit the responsible Federal agency to abdicate its statutory duties by reflexively rubberstamping an environmental impact statement prepared by others; the agency must independently perform its reviewing, analytical and judicial functions and participate actively and significantly in the preparation and drafting process.” *Sierra Club v. Lynn*, 502 F.2d. 43 (6th Cir. 1974). See also, *City of Davis v. Coleman*, 521 F.2d. 661 (9th Cir. 1975).

⁵⁵“Detailed environmental impact statement must cover environmental costs which may be avoided.” *Montgomery v. Ellis*, 364 F. Supp. 517 (D. Ala. 1973).

⁵⁶“To carry out the statutory mandate of this section, every relevant environmental effect of a project must be given consideration in the environmental impact statement.” *Sierra Club v. Morton*, 510 F.2d. 813 (5th Cir. 1975). “Environmental impact statement should discuss all significant primary environmental effects and all substantial secondary environmental effects.” *Life of the Land v. Volpe*, 363 F. Supp. 1171 (D. Hawaii 1972), aff’d, 485 F.2d 460.

⁵⁷“It is absolutely essential to the process under this section that the decisionmaker be provided with a detailed and careful analysis of the relative environmental merits and demerits of the proposed action and possible alternatives.” *National Resources Defense Council v. Callaway*, 524 F.2d 70 (2d Cir. 1975).

⁵⁸*Calvert Cliffs*, supra, note 2.
⁵⁹*Environmental Defense Fund v. TVA*, 339 F. Supp. 806 (E.D. Tenn. 1972).

⁶⁰*National Helium Corp. v. Morton*, 486 F.2d 995 (10th Cir. 1973).

⁶¹See, supra, note 2.

⁶²*Environmental Defense Fund v. Corps of Engineers* 470 F.2d 289 (8th Cir. 1972).

⁶³*Cape Henry Bird Club v. Laird*, 359 F. Supp. 404 (D. Va. 1973), aff’d, 484 F.2d 453.

⁶⁴William R. Tipton, “Environmental Considerations in Project Management,” *Journal of Metals*, May 1977.

⁶⁵Tipton’s estimates do not include any provision for environmental impact reviews where the applicant owns the site and no Federal rights-of-way are involved, Tipton posits that there is no Federal role in this transaction at all, hence no NEPA application, It should be noted, however, that 15 States have enacted comprehensive statutes similar in many respects to NEPA, 4 States have administrative or executive orders requiring environmental reviews, and 7 States have special or limited EIS requirements. See *Environmental Quality—1977, The Eighth Annual Report of the Council on Environmental Quality, 1977*, pp. 130-35, (hereafter “Environment—1977”). Therefore, in some States, the permit review process might come to resemble more closely the Federal process even if no Federal rights-of-way are involved.

⁶⁶*Environmental Impact Statements: An Analysis of 6 Years Experience by 70 Federal Agencies*, Council on Environmental Quality, March 1976.

⁶⁷*Id.* at 28.

⁶⁸*Environmental Quality—1976*, The Seventh Annual Report of the Council on Environmental Quality, 1976, p. 123.

⁶⁹*Environment—1977*, pp. 122-129.

70 Figures in this survey were for the period ending June 30, 1976.

⁷¹*Environment—1977*, pp. 123, 129,

⁷²*Id.* at 129.

⁷³The purpose of this paragraph is not to argue the merits of the cases mentioned or to imply that the delays indicated were environmental, but merely to point out that 177 injunctions do not translate into only 177 individual projects. Challenges to generic programs can have widespread effects.

SECTION 4(f) OF THE DEPARTMENT OF TRANSPORTATION ACT OF 1966

The Department of Transportation (DOT) Act of 1966¹ consolidated various Federal transportation agencies and programs into a single new department. One of the stated purposes of the reorganization was the adoption of the national land preservation policy that a "special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."² To implement this policy, section 4(f) of the DOT Act, as amended,³ imposes specific limitations on the authority of the Secretary of Transportation to approve Federal expenditures for projects that would use such lands. Section 4(f) provides:

It is hereby declared to be the national policy that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of the lands traversed. After August 23, 1968, the Secretary shall not approve any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of National, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of National, State, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use.⁴

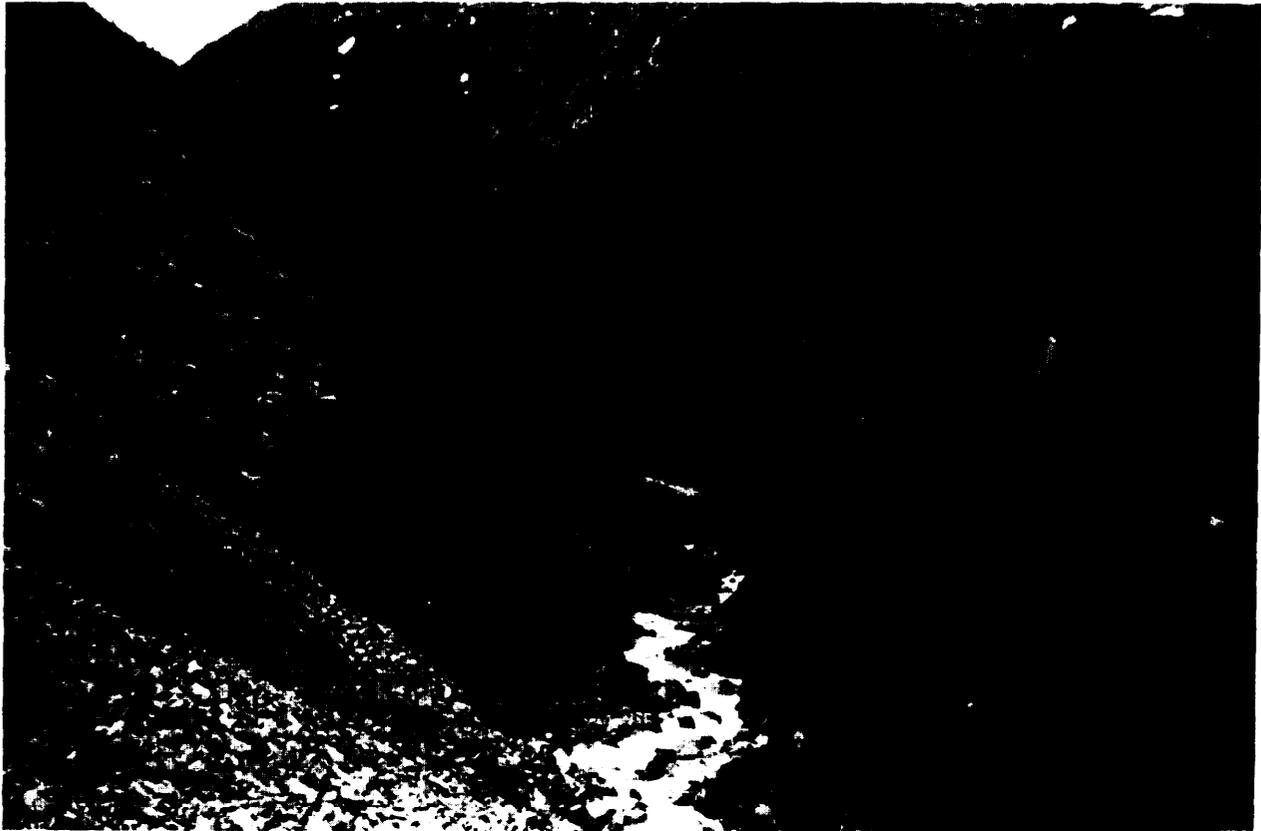
Section 4(f) has three components: it affirms the national policy to preserve public

Note: Footnotes for this section appear on p. 159.

park, refuge, and recreation lands and historic sites; it directs the Secretary to develop transportation plans in cooperation with the States and the Departments of Housing and Urban Development, the Interior, and Agriculture to enhance and maintain the lands traversed by transportation projects; and, most importantly, it imposes direct and explicit restrictions on the authority of the Secretary to approve federally funded programs or projects that would use any of these lands of National, State, or local significance unless there is no prudent and feasible alternative and all possible planning has been included to minimize harm.

Section 4(f) has far-reaching implications for the availability of Federal funds for transportation projects that might be needed to develop mineral resources, not only because it may restrict the approval of projects on certain Federal lands for transportation purposes, but also because it limits the use of State, local, and some private lands. Section 4(f) and a virtually identical provision, section 138 of Title 23, U. S. C., the Federal-Aid Highway Act, as amended,⁵ were passed in response to the recognized tendency on the part of some Federal, State, and local officials to appropriate public park, recreation, and refuge lands and historic sites for highway construction and other transportation projects in order to avoid the disruption and difficulties associated with use of built-up areas. A 1976 amendment to section 138 added the following provision expanding the Secretary's transportation planning responsibilities for Federal-aid highways:

... In carrying out the national policy declared in this section the Secretary in cooperation with the Secretary of the Interior and appropriate State and local officials, is authorized to conduct studies as to the most feasible Federal-aid routes for the movement of motor vehicular traffic through or around national parks so as to best serve the needs



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of the traveling public while preserving the natural beauty of these areas.

TRANSPORTATION PROJECTS COVERED BY SECTION 4(f)

The provisions of section 4(f) are applicable to federally funded transportation programs and projects under the jurisdiction of the Secretary of Transportation. Section 138 applies only to Federal-aid highway projects.⁷ The Federal-aid highway program, which is administered by the Federal Highway Administration (FHWA) of DOT, provides Federal funds for a percentage of the costs of the planning, design, and construction of highways in the interstate, primary, secondary, and urban systems.⁸ Ninety percent of the costs of interstate highways and seventy percent of the costs of other roads are reim-

bursed to States from Federal funds, primarily the Highway Trust Fund.

Other federally aided transportation programs may be subject to 4(f) review as well, if use of protected lands is involved. These include, for example, programs for construction, expansion, and maintenance of railroads, airports, and aviation and navigation aids. Extension of the Alaska Railroad, which is operated by the Federal Railroad Administration, may be subject to 4(f) restrictions if a proposed route made use of protected lands. Because of the magnitude of Federal funding of State highway programs, the primary impact of section 4(f) has been on highway and road construction projects.

For section 4(f) to apply, the project must be federally funded. Transportation projects that are entirely financed by State, local, or private funds are not subject to 4(f) restric-

tions.⁹ These restrictions do not apply to the Federal funding of State and local planning processes and agencies, which may result in a proposal to use park land, since planning is not a program or project requiring use of such lands within the meaning of section 4(f).¹⁰ Section 4(f) is a limitation on the authority of the Secretary of Transportation and thus would not generally apply to approval and construction of roads and other transportation projects on rights-of-way on Federal lands (national parks, refuges, forests, and public land), which are within the jurisdiction of the Secretaries of the Interior and Agriculture, if no DOT funds are involved.

PROTECTED LANDS

The purpose of section 4(f) is to protect “public park and recreation lands, wildlife and waterfowl refuges, and historic sites” from the environmentally destructive effects of transportation projects, by directing the Secretary of Transportation to deny the use of Federal funds for projects requiring the use of these lands, in all but the most unusual circumstances. Lands that are protected by section 4(f), must meet certain statutory requirements. First, except for historic sites,¹¹ the lands must be owned by the Federal, State, or local government. Second, the lands must be designated or used as a park, recreation area, refuge, or historic site. Third, the lands must have National, State, or local significance as determined by the appropriate Federal, State, or local officials. If these requirements are satisfied, then the Secretary may not approve any program or project requiring their use unless he finds (1) that there is no feasible and prudent alternative route, and (2) that the program includes all possible planning to minimize harm to the protected lands. Prior to any such approval, the Secretary must conduct a review of possible alternative routes and plans based on the best available information; this process is known as 4(f) review.

The provisions of section 4(f) clearly apply to components of the National Park System

and the National Wildlife Refuge System. Section 4(f) would also seem to apply to components of the National Wilderness Preservation System and the National Wild and Scenic Rivers System that are not managed as part of the park or refuge systems because of the designated purposes of these systems—recreation and preservation. In the case of other Federal lands that are subject to multiple-use classification, such as the National Forest System and public lands managed by the Bureau of Land Management (BLM) and the Bureau of Reclamation, section 4(f) would not apply if the portion of lands to be taken for a transportation project is not actually being used for park, recreation, wildlife, waterfowl, or historic purposes, and there is no definite formulated plan for such use.¹² As an additional assurance of protection, the managing agency’s land use determination is subject to review by the Secretary for its reasonableness.¹³ Thus, it cannot be assumed that BLM-public lands and forest system lands are automatically not subject to 4(f) review. Public land or forest areas used for recreation, wildlife protection, and historic sites as well as areas that may be under study for potential designation as wilderness areas or Wild and Scenic Rivers System components may require 4(f) review, but for the most part, many of these lands will not require 4(f) review. Moreover, even protected national park, refuge, wilderness, and wild and scenic rivers areas may not require 4(f) review, if the appropriate land manager determines that they do not have National, State, or local significance. This determination of nonsignificance must be independently reviewed by the Secretary of Transportation or his designate.¹⁴

Lands owned by State and local governments are subject to section 4(f) if they are designated as public parks, recreation areas, wildlife or waterfowl refuges, or historic sites.¹⁵ If the lands are managed for multiple uses and have not been officially designated to these protected categories, they will fall within the ambit of section 4(f) if, in the judgment of the official having jurisdiction over the lands,¹⁶ they are actually used for such

purposes. This land use determination is subject to independent review by the Secretary for its reasonableness. Publicly owned lands, which are neither designated nor used for park, refuge, recreation, or historic purposes, are not subject to 4(f) review and approval.

Historic sites that are listed or eligible for inclusion in the National Register of Historic Places are protected by section 4(f) whether or not they are publicly owned. An historic site that is not listed or eligible for the register, is nevertheless protected if the appropriate Federal, State, or local official determines that it has National, State, or local significance.¹⁷ FHWA regulations for treatment of historic sites require that FHWA and State officials apply National Register Criteria to all possible historic sites within the area of potential environmental impact at the earliest possible stage of planning or consideration.¹⁸ Historic sites that are not listed or eligible for the National Register and that are not determined to possess National, State, or local significance are not subject to 4(f) review and approval. The Secretary or his designate must review the nonsignificance determination for its reasonableness.

In order to invoke 4(f) review and protection, Federal, State, and locally owned park, refuge, recreation lands, and historic sites must be found to have National, State, or local significance. The determination of significance is to be made by the officials that have jurisdiction over the lands concerned. Any determination of nonsignificance is subject to review for its reasonableness.¹⁹ If no determination is made by the appropriate official, then the lands are presumed significant for administrative proceedings and any subsequent judicial review. This presumption is based on the national policy of giving the protection of these areas paramount importance.²⁰

OVERTON PARK

In 1971, the U.S. Supreme Court interpreted section 4(f) in *Citizens to Preserve*

Overton Park, Inc. v. Volpe.²¹ That case was a citizens' suit to enjoin expenditure of Federal funds for the construction of an interstate highway through a city park in Memphis, Tenn., on the grounds that the Secretary of Transportation, in his approval of the project, had failed to satisfy the requirements of section 4(f). The district court had granted summary judgment denying the citizens' claim. The denial was based on an interpretation that 4(f) was merely advisory and the Secretary's action was, therefore, discretionary and subject only to narrow judicial review.

The Supreme Court never ruled on the merits of the decision by the Secretary. The case record, reflecting the summary judgment granted by the district court, did not disclose sufficient information on which to base a decision on the merits. The Court did, however, interpret the statute in some detail and clearly set forth the standards for judicial review.

The Court found that the Secretary's decision was subject to judicial review through suits by citizens groups or other aggrieved individuals, under section 701 of the Administrative Procedure Act,²² since it held that there was no statutory provision restricting review of such decisions and the matter was not a subject committed to agency discretion, thus rejecting the district court's interpretation of the statute. The limitation on judicial review of matters committed by law to agency discretion under the Administrative Procedure Act, applies only in those rare instances where "statutes are drawn in such broad terms that there is no law to apply."²³ In implementing section 4(f), the Court found that the Secretary of Transportation clearly had law to apply.²⁴

The Court held that section 4(f) and section 138 are "clear and specific directives" that provide that the Secretary shall not approve expenditures of Federal funds for any program or project requiring the use of any public parklands unless (1) there is no feasible and prudent alternative to the proposed use and (2) the project includes all possible

planning to minimize harm from such use. The Court stated, “This language is a plain and explicit bar to the use of Federal funds for construction of highways and other transportation projects through parks; only the most unusual situations are exempt.”²⁵ The Court further noted that the passage of sections 4(f) and 138 marked congressional rejection of the contention that factors of cost, directness of route, community disruption, and other competing uses should be weighed on an equal basis with the preservation of park land.

But the very existence of these statutes indicates that protection of park land was to be given paramount importance. The few green havens that are public parks were not to be lost unless there were truly unusual factors present in a particular case or the cost or community disruption resulting from alternative routes reached extraordinary magnitudes. If the statutes are to have any meaning, the Secretary cannot approve the destruction of park land unless he finds that alternative routes present unique problems.²⁶

Because section 4(f) strictly limited the Secretary’s actions and imposed specific preconditions on the approval of transportation projects that use park land, the Court found that the Secretary’s decision was subject to full judicial scrutiny. Affidavits issued in support of the administrative decision for litigation purposes were found not to be a sufficient record of the factors weighed in the 4(f) decision. The Court did not hold that the Secretary is required to make formal findings of fact in a 4(f) review, but it stated that the record must disclose the factual basis to support his actions and demonstrate administrative compliance with the requirements of 4(f).²⁷ In response to the Court’s ruling on the inadequacy of the administrative record, DOT-FHWA regulations now require the preparation of a special 4(f) statement whenever 4(f) lands are to be used in a highway project.²⁸

The Court also defined the term “feasible and prudent alternative” and the factors that may properly be considered under each. A

feasible alternative route is a route that is based on sound engineering practices.²⁹ Considerations of cost, delay, and community dislocation are not appropriate factors in the determination of feasible alternative routes, but climate, topography, geology, and technological restraints do relate to feasibility. To find that there is no feasible alternative route, the Secretary must find that, as a matter of sound engineering, the highway or other project could not be constructed along any other route.³⁰

A prudent alternative route is one that presents no unique problems.³¹ For an alternative route to be imprudent it must have truly unusual features so that the costs or community disruption would reach “extraordinary magnitudes.”³² High costs, delay, dislocation of homes and businesses, and other factors commonly associated with highway and other transportation construction are not so unusual or extraordinary as to render an alternative, which resulted in such effects, an imprudent route.

In addition to a finding that there is no feasible or prudent alternative route, section 4(f) requires, as a precondition to approval of a route using park land or other protected areas, that the project include “all possible planning to minimize harm from such use.” Thus protective measures, which may add to costs of the project or impose delay, may not be rejected because of difficulties involved, since such problems do not render the measures impossible, and the protection of parks, refuges, recreation areas, and historic sites is to be given predominance over other factors. Considerations of cost, delay, and disruption are factors relating to the prudence of a particular alternative route and not to the issue of the adequacy of planning for a route using 4(f) land.

THE 4(f) STATEMENT

To provide a basis for 4(f) review and a record of the various factors and alternatives considered, DOT-FHWA regulations require

that a 4(f) statement be prepared for projects or programs that would require use of protected lands within the scope of section 4(f) or section 138. The purpose of the 4(f) statement is to document the consideration, consultations, and alternative studies carried out in determining that there are no feasible and prudent alternatives to the use of protected lands, and to support a determination that the proposed action includes all possible planning to minimize harm.³³ The statement is to be coordinated with the Federal, State, or local agency having jurisdiction over the land, with the Departments of the Interior and Housing and Urban Development, and where appropriate, with the Department of Agriculture.³⁴

DOT-FHWA regulations on preparation of EISs under the National Environmental Policy Act (NEPA) require that an EIS be prepared whenever a 4(f) statement is required. An EIS is required for any major Federal action significantly affecting the environment. The regulations list, among major actions, "a project that warrants a major action classification because it has been given national recognition by Congress. . . . Such a project would be one that falls under section 4(f) of the DOT Act . . ."³⁵ The regulations also provide that "an action that has more than a minimal effect on properties protected under section 4(f) of the DOT Act" is to be considered as an action "significantly affecting the human environment."³⁶ Both the EIS and the 4(f) statement are to be prepared during the location stage of highway development, prior to the selection of a particular location.³⁷ The 4(f) statement may be prepared in coordination with the EIS and may be either a structurally independent section of the EIS or a separate document.³⁸ The 4(f) statement normally will accompany the final EIS through the decision process.³⁹

The 4(f) statement should list the factors used to judge that each alternative is not feasible and prudent along with the special measures planned to minimize harm to the protected land.⁴⁰ Each statement should present a full and complete description of the

proposed project, the 4(f) lands to be used, and the the recreational, historic, wildlife, and environmental characteristics of the surrounding community, plus the potential effects on existing facilities and land users.⁴¹

Accurate and detailed information must be included to support the determination that there is no feasible or prudent alternative. "Supporting information should demonstrate that there are unique problems, truly unusual factors present, and evidence that the cost or community disruption resulting from such routes reaches extraordinary magnitudes."⁴²

The statement must also include the "best available information" on measures to minimize harm to section 4(f) land from highway construction. Examples of such measures include replacement of or compensation for lands taken, improvement of remaining lands and facilities, design features to reduce the effects of such use, construction of substitute facilities prior to destruction or taking of 4(f) lands, and conducting scheduled demolition, moving, and construction activities during the off-season.⁴³ Finally the statement should include a summary of the coordination with other Government agencies, and copies of comments received during agency review and their disposition.⁴⁴

In order for the Secretary to approve use of lands protected by section 4(f) and section 138, he must find that there is no feasible and prudent alternative to their use and that all possible planning has been done to minimize harm. There must be consideration of alternative routes and plans, all of which must be found to be neither prudent nor feasible. Considerations of cost, disruption, and delay bear on the determination of prudence but they are not to be given equal status with the national policy on preservation of park and other lands. Only the most unusual circumstances will justify approval of a route through park land. Any statement proposing use of 4(f) land must include all possible planning to avoid environmental harm before it may be approved. Cost, delay, and disruption are all factors relating to the prudence of the

route and not to the issue of planning. The review of alternative routes and plans, coordination with other agencies, and factors leading to the approval of use of protected lands must be documented in a 4(f) state-

ment.⁴⁵ Only after the substantive and procedural requirements of 4(f) have been satisfied may the Secretary approve Federal expenditures for construction of the project.

FOOTNOTE REFERENCES FOR SECTION 4(f)

¹Public Law 89-670, 80 Stat. 931, Oct. 15, 1976, 49 U.S.C. section 1651 et seq.

²49 U.S.C. section 1651(b)(2).

³49 U.S.C. section 1653(f).

⁴Id.

⁵Through several amendments, section 138 is now substantially identical to section 4(f): Public Law 89-574, section 15, 80 Stat. 771, Sept. 13, 1966, as amended by Public Law 90-495, section 18(a), 82 Stat. 823, Aug. 23, 1968, and Public Law 94-280, Title 1, section 124, 90 Stat. 440, May 5, 1976.

⁶Public Law 94-280, Title 1, section 124, 90 Stat. 440, May 5, 1976, 23 U.S.C., 138.

⁷See note, "Protecting Public Parkland from Indirect Federal Highway Intrusion," 62 Iowa Law Review 960 (1977) at 963, n. 31.

⁸The routes for Federal-aid highways are designated by State or local officials subject to approval by the Secretary of Transportation, 23 U.S.C. 103, 23 U.S.C. 317, 23 U.S.C. 103(f). The State of Alaska is heavily dependent on Federal funds for the construction of surface transportation facilities as are other States. In FY 1976, the Department of Transportation provided over \$113 million for the construction or repair of surface transportation facilities in Alaska. It is doubtful that the State of Alaska would make any large expenditures for surface transportation facilities without Federal support. H. D. Scougal, Alaskan Commissioner of Highways, "Highway Status for 1976, Plans for 1977," Alaska Construction and Oil, January 1977, p. 51.

⁹See *Citizens for Food and Progress, Inc. v. Musgrove*, 397 F. Supp. 397 (D. Ga. 1975), and *Named Individ. Members of the San Antonio Conservation Society v. Texas Highway Dept.*, 496 F.2d 1017, at 1022-23 (5th Cir. 1974), cert. denied, 420 U.S. 296 (1975).

¹⁰*Hill v. Coleman*, 399 F. Supp. 194 (D. Del. 1975).

¹¹23 CFR section 771.19(b). See also, *Thompson v. Fugate*, 347 F. Supp. 120 (E.D. Va. 1972), *Daly v. Volpe*, 350 F. Supp. 252, 256 (W.D. Wash. 1972), aff'd mem., 514 F.2d 1106 (9th Cir. 1975).

¹²23 CFR 771.19(d).

¹³Id.

¹⁴23 CFR 771.19(c).

¹⁵*Citizens Environmental Counsel v. Volpe*, 365 F. Supp. 286 (D. Kan. 1973), aff'd, 484 F.2d, 870, cert. denied, 416 U.S. 936.

¹⁶23 CFR 771.19(d),

¹⁷23 CFR 771.19(b).

¹⁸23 CFR 771.20.

¹⁹23 CFR 771.19(c).

²⁰*Arlington Coalition on Transportation v. Volpe*, 458 F.2d 1323 (4th Cir. 1972), cert. denied, 409 U.S. 1000,

²¹401 U.S. 402 (1970).

²²5 U.S.C. 701.

²³401 U.S. 410, citing, S. Rept. 752, 79th Cong. 1st

sess. 16 (1945).

²⁴401 U.S. 411

²⁵Id.

²⁶Id. at 412, 413,

²⁷Id. at 408.

²⁸23 CFR 771.19.

²⁹401 U.S. 411, In *Brooks v. Coleman*, 518 F.2d 17, 19 (9th Cir. 1975), the Ninth Circuit interpreted feasibility to require a tested engineering method and held infeasible a proposed method that had never been tried in the United States. See also, *Monroe County Conservation Council v. Volpe*, 472 F.2d 693 (2d Cir. 1972).

³⁰401 U.S. 411.

³¹401 U.S. 413,

³²Id.

³³23 CFR 771.19(a).

³⁴23 CFR 771.19(g).

³⁵23 CFR 771.9(d)(7).

³⁶23 CFR 771.19(e)(i).

³⁷23 CFR 771.5(b). FHWA regulations divided highway development into four stages: (1) System Planning Stage—regional analysis of transportation needs and the identification of transportation corridors; (2) Location Stage—from the end of system planning through the selection of a particular location; (3) Design Stage—from the selection of a particular location to the start of construction; and (4) Construction. 23 CFR 795.2(e).

³⁸23 CFR 771.19(f). See also, *Stop H-3 Ass'n v. Coleman*, 533 F.2d 434 (9th Cir. 1976).

³⁹23 CFR 771.19(n).

⁴⁰23 CFR 771.19(f).

⁴¹23 CFR 771.19(i).

⁴²23 CFR 771.19(j).

⁴³23 CFR 771.19(k).

⁴⁴23 CFR 771.19(n).

⁴⁵*D. C. Federation of Civic Associations v. Volpe*, 459 F.2d 1231 (D.C. Cir. 1972), cert. denied, 405 U.S. 1030.

ENDANGERED SPECIES ACT OF 1973

The Endangered Species Act provides for Federal identification of endangered and threatened species of fish, wildlife, and plants; prohibits private activity that imperils such species; and requires Federal agencies to avoid any activities that would jeopardize such species or result in the destruction of critical habitats. In its restriction on Federal activities, particularly land use decisions relating to critical habitats, the Act could have an effect on access to mineral resources.

ENDANGERED SPECIES

The Act sets forth the following purposes:

... to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.²

The Secretary of the Interior, in consultation with the Secretary of Commerce, is directed to promulgate regulations identifying endangered species and threatened species.³ An endangered species is defined in the Act as:

... any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this chapter would present an overwhelming risk to man.⁴

A threatened species is defined as:

... any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.⁵

The determination of whether a particular species of fish, wildlife, or plant is en-

Note: Footnotes for this section appear on pp. 163-164.

dangered may be based on any of the following factors:

1. The present or threatened destruction, modification, or curtailment of its habitat or range;
2. Overutilization for commercial, sporting, scientific, or educational purposes;
3. Disease or predation;
4. The inadequacy of existing regulatory mechanisms; and
5. Other natural or manmade factors affecting its continued existence.⁶

The determination must be on the basis of "the best scientific and commercial data available" to the Secretary after appropriate consultation with affected States, interested persons and organizations, interested Federal agencies and, for foreign species, consultation with affected nations. Summaries of comments received on the proposal to add or remove a species from the endangered species list are published in the Federal Register.

PROHIBITED ACTS

The Secretary of the Interior is authorized to issue "such regulations as he deems necessary and advisable to provide for the conservation" of listed species. With respect to any listed endangered species it is unlawful to "... take any such species within the United States" or "upon the high seas," or to "... violate any regulation pertaining to such species or to any (listed) threatened species."⁷ As used in the Act, "the term 'take' means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."⁸ Regulations issued or proposed pursuant to the Act are to be published in the Federal Register with a statement by the Secretary of the facts supporting the regulation and the relationship of such facts to the regulation.⁹

Federal Actions

Section 7 of the Endangered Species Act requires that all Federal agencies take steps to ensure that their actions do not jeopardize the existence of endangered and threatened species.

All other Federal departments and agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 1533 of this title and by taking such action necessary to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of such endangered species and threatened species or result in the destruction or modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical. ”

Thus, a Federal land management agency evaluating a proposed action (such as granting a right-of-way over Federal lands) must consider whether the action may harm an endangered or threatened species or detrimentally affect a critical habitat. The agency must consult with the Secretary of the Interior (primarily through the Fish and Wildlife Service) to determine whether any harm may result and what steps can be taken to avoid or lessen any risk to an endangered or threatened species or a critical habitat.

In areas that are home to unique and endangered species, a consideration of the potential effects a proposed action might have and of the conditions necessary to safeguard the protected species in compliance with the Act could impose substantial and additional constraints on a Federal land management agency's issuance of rights-of-way across Federal areas. In other areas where there are few or no endangered species, the compliance requirements would have a lesser, if any, effect on the actions of Federal land management agencies.

Section 7 of the Endangered Species Act of 1973 has been interpreted by the courts as imposing a duty on all Federal agencies to ensure that their actions would not jeopardize the continued existence of any endangered or threatened species. Compliance with the section requires that all agencies must consider the effects, if any, a proposed action may have on an endangered or threatened species and must consult with the Secretary of the Interior in devising programs for the conservation of listed species. These duties are enforceable in court by a citizen's suit authorized by section 11(g) of the Endangered Species Act.

Any agency that fails to satisfy the requirements of the Act in its consideration or approval of any action maybe enjoined from implementing the proposed action until the agency is in compliance.

Judicial review of the Endangered Species Act has centered on two questions: (1) Can the Secretary of the Interior, by disapproving of agency action with respect to an endangered or threatened species, veto such a project? and (2) Can a court permanently enjoin a project on the grounds that it violates the Act?

The first question has, apparently, been answered in the negative. In *National Wildlife Federation v. Coleman*, the fifth circuit held:

However, once an agency has had meaningful consultation with the Secretary of the Interior concerning actions which may affect an endangered species the final decision of whether or not to proceed with the action lies with the agency itself, Section 7 does not give the Department of the Interior a veto over the actions of other agencies, provided that the required consultation has occurred. It follows that after consulting with the Secretary the Federal agency involved must determine whether it has taken all necessary action to insure that its actions will not jeopardize the continued existence of an endangered species or destroy or modify habitat critical to the existence of the species. ”

In another case involving section 7, it was held:

Consultation under section 7 does not require acquiescence. Should a difference of opinion arise as to a given project the responsibility for decision after consultation is not vested in the Secretary but in the agency involved.¹²

But having reached the decision that section 7 does not provide for a veto of projects by the Secretary of the Interior, both courts ruled that the decision of an agency to go ahead with a project that might present a risk to an endangered species was a proper subject for judicial review under the standards of the Administrative Procedure Act. That standard provides that an agency action may be reversed if it is found that an agency decision was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law."¹³ It is the application of the last part of this test to agency actions which admittedly harm an endangered species, but are justified on other grounds, that remains a subject of controversy and judicial uncertainty.

In *Hill v. Tennessee Valley Authority* (TVA),¹⁴ the celebrated case involving the halting of the \$100 million Tellico Dam because its construction threatened the existence of the snail darter, the sixth circuit found that a decision to continue the project would be a "prima facie" violation of section 7 and, hence, unlawful.¹⁵ The opinion seems to vigorously reject the notion that violation of the Act may properly be balanced against other benefits associated with the project:

TVA concedes the existence of a predictable causal nexus between the impoundment of the Little Tennessee and the ultimate depletion of the snail darter population. This admission alone suffices to bring the affirmative action requirement of section 7 into play.¹⁶

TVA claims to have done everything possible to save the snail darter, short of abandoning work on the dam. That alternative is deemed by TVA to be innately unreasonable. We do not agree. It is conceivable that the

welfare of an endangered species may weigh more heavily upon the public conscience as expressed by the final will of Congress, than the writeoff of those millions of dollars already expended for Tellico in excess of its present salvageable value.¹⁷

The court accepted the opinion of the Department of the Interior that the Act was violated by an action which:

... might be expected to result in a reduction in the number or distribution of the species of sufficient magnitude to place the species in further jeopardy, or restrict the potential and reasonable expansion or recovery of the species.¹⁸

It also indicated that, despite the lack of a veto power, the views of the Secretary of the Interior on the effect of an agency action were to be given great weight. After noting the lack of veto authority, the court stated, "However, his compliance standards may properly influence final judicial review of such actions, particularly as to technical matters committed by statute to his special expertise."¹⁹

On June 15, 1978, the Supreme Court affirmed the ruling of the sixth circuit in the Tellico Dam case.²⁰ In upholding the circuit court decision, the Supreme Court rejected TVA's arguments that the dam should be exempted from section 7. The Court dismissed the argument that Congress had exempted the dam from section 7 by implication because it had continued to appropriate funds after the snail darter was designated as an endangered species.²¹ In response to TVA's argument that section 7 should be interpreted to allow the monetary value of the substantially completed project to be weighed against the "value" of the snail darter, the Court said:

The plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the Cost.²²

The Court found that there was an "irreconcilable conflict" between the operation of the Tellico Dam and the explicit provisions of

section 7 and that in such circumstances the plain and unambiguous meaning of section 7 must prevail.

Congress has spoken in the plainest of words, making it abundantly clear that the balance has been struck in favor of affording endangered species the highest of priorities, thereby adopting a policy which it described as 'institutionalized caution.'²³

The case of the notorious snail darter resulted in legislative action to amend section 7, even before the final decision in *Hill* was issued by the Supreme Court. In the final days of the 95th Congress, the Endangered Species Act was reauthorized under a compromise bill that set up a process for exempting some Federal projects that might harm a protected species or habitat.²⁴

FOOTNOTE REFERENCES FOR ENDANGERED SPECIES ACT OF 1973

¹Public Law 93-205, 87 Stat. 885, Dec. 28, 1973, as amended by Public Law 94-359, 90 Stat. 911 July 12, 1976, 16 U.S.C. 1531 et seq.

²16 U.S.C. 1531(b) These treaties include the Convention on International Trade in Endangered Species of Wild Fauna and Flora and the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere,

³16 U.S.C. 1532(4).

⁴16 U.S.C. 1532(15).

⁵16 U.S.C. 1533(a)(1).

⁶16 U.S.C. 1533(b)(1).

⁷16 U.S.C. 1538(a).

⁸16 U.S.C. 1532(14).

⁹16 U.S.C. 1533(f)(3).

¹⁰16 U.S.C. 1537.

¹¹*National Wildlife Federation v. Coleman*, 529 F. 2d 369 (5th Cir. 1976) cert. denied, 97 S. Ct. 489 (1976). *Hill v. TVA*, 549 F.2d 1064, 1071 (6th Cir. 1978) abstracts *National Wildlife Federation v. Coleman* as follows:

The welfare of the Mississippi Sandhill Crane was threatened by the future construction of a 5.7-mile segment of Interstate Highway 1-10 scheduled to traverse the Crane's designated critical habitat. Only 40 Sandhill Cranes are known to exist. Based on the weight of the evidence, the Fifth Circuit reversed the district court's denial of injunctive relief and remanded the case with instructions that an injunction issue halting activities which might jeopardize the continued existence of the Mississippi Sandhill Crane or destroy or modify critical habitat. The injunction is to remain in effect until the Secretary of the Interior determines that modifications to the project will bring it into compliance with the Act.

In *National Wildlife Federation v. Coleman*, as in I-III, the Department of the Interior had objected to the agency decision to continue with a project.

¹²*Sierra Club v. Froehle*, 534 F. 2d. 1289 (5th Cir. 1976). This case involved the alleged impact of construction of the Meramec Park reservoir by the Corps of Engineers on the Indiana bat. A request for injunctive relief was denied on the grounds that the Sierra

Club had failed to meet its "burden of showing that the action of the Corps had jeopardized or would jeopardize the continued existence of the Indiana bat." *Id.* at 1305.

¹³See *Sierra Club v. Froehle*, 534 F.2d 1289, 1304.

¹⁴*Hill v. Tennessee Valley Authority*, 549 F.2d.1064 (6th Cir. 1977), The Tellico Dam—a concrete and earth-fill dam near the mouth of the Little Tennessee River—was originally approved by Congress in 1966. It had been the subject of two previously unsuccessful court challenges under the National Environmental Policy Act alleging defects in the environmental impact statement. In August 1973, a University of Tennessee ichthyologist discovered a hitherto unknown species of fish, the snail darter (*Percina imostomatanasai*) thriving in the Little Tennessee River. It is a 3-inch, tannish, bottom-dwelling member of the perch family that feeds on freshwater snails. The river not only provides a full supply of food, but also, because it is free-flowing, maintains, through the aerating action of its rapidly moving currents, the high oxygen levels required to sustain this species. The snail darter's range appears to be wholly confined to a 17-mile stretch of the Little Tennessee. TVA searched approximately 70 rivers in Alabama and Tennessee without finding any more specimens of this species. The agency also attempted, unsuccessfully to transplant some specimens to a similar river.

On Nov. 10, 1975, the Secretary of the Interior designated the snail darter an endangered species, 50 CFR 17.11(i), 40 F.R. 4705 (Nov. 10, 1975). In April of 1976, the U.S. Fish and Wildlife Service designated river miles 0.5 to 17 as the critical habitat of the snail darter. 50 CFR 17.61, 41 F.R. 13926. The Tellico Dam, over 80 percent complete, was scheduled to have been completed in January 1977.

¹⁵*Hill v. TVA*, 549 F.2d. at 1069, 1070.

¹⁶*Id.* at 1070.

¹⁷*Id.* at 1074.

¹⁸Id. at 1070. The Department of the Interior definition was set forth at 40 F.R. 17764 (1976).

¹⁹Id. at 1070.

²⁰TVA v. Hill,—U.S.—, 98 S. Ct. 2279, 57 L. Ed 2117, 46 U. S.L.W. 4673.

²¹98 S. Ct. 2279, 2299.

²²98 S. Ct. 2297.

²³98 S. Ct. 2302.

²⁴See Environmental Study Conference, Weekly Bulletin Wrapup Addendum, Oct. 16, 1978, at 3-4.

CLEAN AIR ACT

The Clean Air Act, as amended,¹ establishes a national program for the regulation of air pollution. The program is directed by the Environmental Protection Agency (EPA). State and local governments have primary responsibility for the prevention and control of air pollution at the source, subject to EPA review. Federal land management agencies and Indian tribes also play an important role in determining air quality control standards on Federal and Indian lands.

The Act applies to all areas, not just those suffering from extreme air pollution. Its effects are most strongly felt in areas at opposite ends of the clean air spectrum: those areas having the cleanest air and those where air pollution presents a danger to the public health. The latter areas—known as nonattainment regions—are under strict regulatory controls designed to reduce levels of air pollution. The former—generally called nondegradation regions—are affected by a statutory program for the prevention of significant deterioration (PSD) aimed at preserving the existing high air quality.

Mining activities, particularly those in the Western United States and Alaska, are likely to be affected by the PSD program because air quality in that part of the country is generally quite good. However, occasionally because of mining operations, some western areas are in nonattainment status. In addition, some mining operations and activities associated with mining, such as smelting and refining and fossil fuel electric generation, are major sources of air pollution and subject to regulation wherever located.

Regulation under the Clean Air Act is focused on the prevention and reduction of air pollution involving five so-called “criteria pollutants:” particulate, sulfur oxides, carbon monoxide, nitrogen dioxide, and photochemical oxidants.² These substances, which are known to adversely affect public health

and safety, are common products of industrial, commercial, and transportation activities. Based on medical information, EPA has established national standards for the maximum allowable concentrations of these pollutants in air. “Primary standards” are set at levels necessary to protect the public health from the known adverse effects of these pollutants. More stringent “secondary standards” have been established for some of these pollutants to protect the public welfare from the known and anticipated adverse effects of a pollutant. The Clean Air Act sets forth an exact timetable by which all areas of the Nation are to meet primary standards for each pollutant; secondary standards are to be met on a more flexible schedule.

To achieve the statutory goal of reducing the presence of the criteria pollutants below the primary and secondary standards, the Clean Air Act authorizes a broad array of plans, programs, and regulatory actions. The major elements of the program are:³

- Establishment of national ambient air quality standards (NAAQS) for air pollutants known to pose a risk to the public health or welfare;
- Submission by the States of implementation plans to achieve and maintain Federal air quality standards;
- Review and approval of State implementation plans by the Administrator of EPA and issuance of regulations at the Federal level to remedy any deficiencies in State plans;
- Federal emission standards for major new industrial, commercial, and electric-generating facilities;
- State programs to monitor air quality, inspect facilities, and issue permits to limit emissions from major sources of pollution: and

Note: Footnotes for this section appear on pp. 177-181.

- A program to prevent significant deterioration of air quality in areas that exceed Federal air quality standards for the criteria pollutants.

The regulations generated through these programs govern all sources of air pollution, including mining. Mining activities can be directly and indirectly affected by several different aspects of clean air regulation. A State Implementation Plan (SIP) may set emissions standards for new facilities or require existing facilities to abate present air pollution levels. Federal "standards of performance" have been promulgated for certain large industrial facilities, setting minimum requirements for the use of pollution control technology. Preconstruction review of new sources of pollution is required in both non-attainment and nondegradation areas; in non-attainment areas, new sources of pollution must use the most advanced pollution control technology available, in nondegradation areas, new sources, which would increase pollution beyond specifically stated limits, are flatly prohibited. New, as yet undefined requirements, will be placed on sources of pollution that affect visibility in national parks and wilderness areas.

It is difficult to predict the exact effect the Clean Air Act will have on mining activities or mineral access. Not only are the major impacts of air quality regulation highly site-specific, but the recently enacted Clean Air Act Amendments of 1977 made major changes in several areas that most directly affect the mining industry. In some instances, Federal regulations implementing those changes have not yet been put in final form. Changes in State regulatory programs, which flow from the amendments, will also take time to develop.

To understand the existing status of regulation under the Clean Air Act and the intent and likely impact of the 1977 amendments, it is necessary to have some background on the implementation of the Clean Air Act Amendments of 1970 and the problems which arose under that law.

IMPLEMENTATION OF THE CLEAN AIR ACT AND THE 1977 AMENDMENTS

The 1970 amendments to the Clean Air Act launched an ambitious program for the abatement of air pollution by 1977. Problems encountered in meeting this objective led to its major revision by the amendments of 1977.

The 1970 amendments to the Act expressed the intent of Congress that air quality standards should be adequate to protect the public health, that they should be inviolable and not subject to compromise, and that they should be met according to a timetable set forth in the Act. Compliance extensions granted to the automobile industry by EPA, and the 1973 energy crisis, which resulted in shortages of low-polluting fuels, contributed to delays in meeting the timetable. These problems were addressed in the Energy Supply and Environmental Coordination Act of 1974 (ESECA),⁴ which further extended auto emission control deadlines, and mandated the increased use of coal and other domestic fuels by temporarily lowering the standards for certain industries and by extending implementation schedules.

Although, by 1975, some pollutant emissions had been reduced and some progress made nationwide in controlling air pollution, industrial growth and the proliferation of automobiles more than offset whatever improvements had been made. Moreover, new data indicated that pollutants from heavily contaminated areas were spreading to remote rural regions, and that air pollutants such as sulfates and sulfuric acid, for which there were no air quality standards, were beginning to present new health hazards. EPA reported that by 1977 only 91 of the Nation's 247 air quality control regions had achieved national primary air quality standards for all of the major regulated air pollutants.⁵ The Council on Environmental Quality (CEQ) found that emissions from automobiles were increasing at a rate of 4.6 to 4.9 percent per year, and that emissions from stationary

sources were contributing progressively increasing proportions to the pollutant load in the ambient air. For example, the total nitrogen dioxide emissions from powerplants were increasing at an annual rate of 6.9 to 7.4 percent.' A study conducted for Congress by the National Academy of Sciences concluded that safety margins associated with ambient air quality standards were only marginally adequate; that about 40 million persons could be classified as susceptible to unhealthy air; and that an estimated 15,000 excess deaths were caused by air pollution annually, 4,000 of them directly attributable to automobile emissions.' Additional field tests conducted by individual States showed that damage linked directly to industrial pollution, which extended hundreds of miles beyond the sources of emissions, was reducing yields in forests and other crops in some regions by as much as 75 percent.

This last finding was particularly significant because the courts had interpreted the Clean Air Act as requiring the protection of air quality in areas that were cleaner than the national standards.' In response to the courts, the EPA promulgated regulations late in 1974, which developed a system for classifying areas with respect to allowable incremental pollution:⁹ Class I areas, in which almost no increment was allowed; Class II areas, in which moderate increments were allowed; and Class III areas, in which increments to the national standard were allowed. Initially, all areas were classified as Class II.

The 1977 amendments to the Clean Air Act contained detailed provisions for the prevention of significant deterioration. Specified permissible increments of sulfur oxides and particulate were established. Certain Federal areas were immediately designated as Class I areas, where air quality was to remain virtually unchanged. All other clean air areas were designated Class II, thus allowing moderate industrial growth. The States may redesignate Class II areas as they deem appropriate, subject to procedures, such as

hearings and consultation with Federal land managers, required in the Act.

Classification under the Clean Air Act is of particular concern to the mineral industry in Alaska and in the West, where there are vast areas where air quality meets or exceeds the national secondary standards, and where some large conservation units have been designated as mandatory Class I areas. There are certain other Federal land management units that may not be redesignated as Class III areas.

The 1977 amendments to the Clean Air Act also contain a new section dealing with pollution controls to achieve visibility goals for certain Federal areas where visibility has been identified as an important value. These areas are to be studied and any necessary measures taken to achieve the established visibility standards. In addition, the 1977 amendments extended the deadlines for meeting the EPA NAAQS from mid-1977 to December 31, 1982, for sulfur oxides, nitrogen dioxide, and particulate matter, and to December 31, 1987, for carbon monoxide and photochemical oxidants.

REGULATION UNDER THE CLEAN AIR ACT

Mining activities are governed by Title I of the Clean Air Act, which covers air pollution from stationary sources. Unlike Title II of the Act, which established Federal controls on automobile emissions, Title I operates through a series of regulatory strategies, some developed and enforced at the State level, some at the Federal level, and some within specialized local units of government with responsibility for air pollution control. Furthermore, under Title I, the type of regulation applied to nonvehicular sources of pollution lacks the exact and all-encompassing character of auto pollution regulation. Each automobile has a federally assigned exact emission limit it must meet, these limits are set forth years in advance and they are the

only air pollution requirements placed on autos.

Stationary sources¹⁰ rarely have exact and foreseeable limits placed on them (new source standards of performance are an exception). Pollution restrictions are determined by the location of a source, by what other sources of pollution already exist in an area, by whether a source is new or old, by which criteria pollutant, if any, it emits and by whether an area is in either a nonattainment or a nondegradation region. Depending on the type of facility and its location, pollution regulations may be imposed by a State or local unit of government, by EPA, or by all three. On occasion, the emissions of one pollutant will be subject to a certain level of control, e.g., a requirement that emissions limitation technology be at least as good as that used anywhere in the country; and the emissions of another pollutant will be controlled under a totally different regimen or effectively uncontrolled.

Mineral access is affected by several important elements of the clean air regulatory program. These include: the establishment of NAAQS of performance; prevention of significant deterioration; restrictions on nonattainment areas; and the visibility program. Each of these will be discussed below. Where appropriate there will be discussion of the roles of Federal land managers in pollution control and in analysis of State and local regulation in Alaska. All section references are to the Clean Air Act.

NATIONAL AIR QUALITY STANDARDS

Section 109 provides for the development of national air quality standards for major pollutants. Two types of ambient air quality standards are designated:

1. Primary standards, which establish the level of air quality necessary with an adequate margin of safety to protect human health.

- z. Secondary standards, which establish levels necessary to safeguard values pertaining to public welfare including plant and animal life, visibility, buildings, and materials.

National ambient air quality standards have been established for the following pollutants: carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter, hydrocarbons, and photochemical oxidants.¹¹ (A standard is being developed for lead.) In each case, the standard gives the maximum concentration allowed during a given time period, and frequently places a limit on the number of times that the concentration can be exceeded within a given time period.

Classification of an area with respect to the ambient air quality for each pollutant has important consequences. The Nation is divided into 247 air quality control regions (AQCR) for the purpose of managing pollution control programs at the local level. Compliance with an NAAQS is generally measured on an AQCR basis, although smaller area designations are permitted by EPA for some pollutants where they form an appropriate basis for control of the pollutant. These designations are extremely significant. Areas that are found by EPA to be in nonattainment status are subject to a particular set of requirements under part D of the Act. Areas that meet or exceed standards are subject to the PSD regulations set forth in part C of the Act. Classification of a large area on the basis of a highly localized condition could have the effect of placing inappropriate and demanding requirements on areas that did not need or deserve them.

Alaska is divided into four AQCRs.¹² All four regions exceed the national standards for particulate, oxidants, nitrogen oxides, and sulfur oxides. The cities of Fairbanks and Anchorage (but not the rest of the two AQCRs in which they are located) are nonattainment areas for carbon monoxide while the rest of the State exceeds the national standards.¹³ Thus Fairbanks and Anchorage will be both nonattainment and nondegradation areas,

while the rest of the State will be a nondegradation area for all pollutants. Similarly much of Arizona has nonattainment status for particulates and oxidants, while the whole State exceeds national standards for nitrogen dioxide and all but two counties exceed the standard for carbon monoxide.¹⁴

While an attainment or nonattainment status for an area has an extremely important regulatory impact on existing sources of pollution, it has substantially less importance in the regulation of new sources. With the passage of the 1977 amendments, almost every new source of pollution will undergo a stringent preconstruction review regardless of whether it is located in an attainment area or a nonattainment area. The preamble to the final rule setting forth attainment status designations indicates three reasons why this will happen:¹⁵

First, new sources, wherever they propose to locate, must be reviewed for their impact on all nearby areas as well as that in which they would locate. If an area on which a new source would impact is designated differently than the one in which it is located, the designation of the latter would not necessarily determine the rules to which the source would be subject. Second, PSD rules apply in any area in which at least one NAAQS is attained, and since virtually every area in the country shows attainment for at least one pollutant, the PSD review will be a requisite virtually everywhere. Finally, case-by-case new source review is necessitated to account for the possibility that an area with a particular designation may encompass "pockets" which do not fit the designation,

STATE IMPLEMENTATION PLANS

Section 110 requires each State to submit an implementation plan that sets forth the steps it will take to meet both the primary and the secondary standards" for each pollutant that is subject to an NAAQS. The plan must show that it will meet the primary standards within the statutory time limit and the secondary standards within a reasonable time thereafter.

A State Implementation Plan (SIP) cannot be approved unless the State has the legal authority to:¹⁷

1. Adopt emission standards and limitations;
2. Enforce laws and regulations and seek injunctive relief;
3. Reduce pollution emissions on an emergency basis;
4. Prohibit the construction or operation of any source that will prevent either the attainment or the maintenance of any air quality standard or that will interfere with resources to prevent significant deterioration;
5. Obtain all necessary information; and
6. Require owners and operators of stationary sources to install emission monitoring devices.

Every implementation plan must indicate how these legal authorities will be used in executing a control strategy for each pollutant, Compliance schedules for the gradual abatement of major existing sources of pollution are central to these control strategies. State and local officials are primarily responsible for making decisions about the amount that pollution must be reduced by existing facilities. The EPA has the authority to disapprove compliance schedules that, owing to the timing of extensions, prevent attainment or maintenance of air quality standards. For the most part, however, it is up to the State to decide the mix of sources to be abated, to what extent, and in what period of time. Within the framework of NAAQS and the statutory time period, the State has a choice of options. (When there is, for example, a single large emitter that causes the standards to be violated, these options obviously become limited.) A State can also decide how much to reduce pollution below the existing levels in order to improve the air quality sufficiently to allow for new industry and development.

The timetable for meeting NAAQS in the Clean Air Act of 1970 called for attainment in

most regions by 1975, with no extensions beyond 1977. Not only were these deadlines generally unmet, but EPA had little effective authority to enforce them. By 1977, only about 40 percent of all AQCRs were meeting the requirements for particulate and photochemical oxidants, and about 20 to 25 percent did not achieve the standards for sulfur dioxide and carbon monoxide.¹⁸

Congress responded by extending the statutory compliance dates for particulate, nitrogen dioxide, and sulfur oxides until December 31, 1982, and for carbon monoxide and photochemical oxidants, until December 31, 1987. In addition, stricter limits were placed on such activities as the construction of new stationary sources. One provision of the 1977 amendments¹⁹ makes it mandatory for State plans to include an enforceable permit program for regulating the construction, modification, or operation of any major stationary source in areas that are not in an attainment status or that have pollution levels above the national standard.²⁰

The States are responsible for formulating implementation plans, but if a plan is deemed inadequate, the Administrator of the EPA has the authority to promulgate a plan.²¹ In practice, he will normally approve a plan "with exceptions, and only issue whatever provisions are needed to meet specific deficiencies."²² His right to promulgate plans is limited to those regulatory aspects where he can rely on authorities granted by the Act; and while he can disapprove any nonregulatory aspect of a plan, he cannot issue substitute provisions.²³ In other words, if the Administrator disapproves of such elements of the plan as numbers, dates, procedures, and sampling methods he can change them. But if, for example, he finds that a State agency lacks a particular needed authority, or even that there is no proper State agency, he cannot invest the existing agency with the missing power or create a new agency. He can, however, assume the regulatory function, e.g., require that permits be filed with EPA.

The siting of mining operations and associated primary-processing and electric-gener-

ating facilities could be constrained in some areas by SIP provisions for attaining and maintaining NAAQS. For example, in areas where the standards for particulate matter are frequently exceeded owing to natural phenomena such as duststorms (these occur in Alaska and in parts of the West), additional sources of high dust generation from activities such as surface mining or mine road construction and use may be restricted.²⁴ The development of mine-associated primary-processing plants and electric-generating facilities must satisfy emission standards set forth in the SIP. Those portions of the SIP that deal with preconstruction review of new sources most directly affect the mining industry.

PRECONSTRUCTION REVIEW OF MAJOR NEW STATIONARY SOURCES

New facilities, buildings, structures, or installations are indicative of industrial development and commercial growth. However, they are also potential emitters of air pollution. The Clean Air Act is intended to encourage, and if need be compel, the builders of major sources of pollution²⁵ to use the most advanced technology for pollution control. If successful, this will replace existing high-pollution installations with a generation of low-pollution facilities and provide some leeway for future industrial expansion, without imperiling air quality.

The control of new sources is accomplished by preconstruction review. This is generally undertaken by the State or other local government unit that is responsible for the implementation of air quality plans. There are four different types of preconstruction review:

- a. Review of new sources to determine their effect on attainment and maintenance of NAAQS;
- b. Review of new sources for which new source standards of performance have been established;

- c. Review of new sources in a nonattainment area, where the air does not satisfy the NAAQS; and
- d. Review of new sources in a nondegradation area, where the air is cleaner than the NAAQS.

All four types of review take place in Alaska. The first three are discussed in this section.

Preconstruction Review for Effects on Attainment and Maintenance

EPA regulations require preconstruction review of all new sources that might jeopardize the maintenance of primary and secondary standards.²⁶ As noted earlier, the Act requires that any SIP exhibit adequate State authority to prevent the construction of a source that would interfere with the attainment or maintenance of an air quality standard.

In Alaska, preconstruction review is accomplished by means of a permit system.²⁷ A permit is required for any facility that is capable of emitting 25 tons per year of sulfur oxides or particulate, or 100 tons per year of nitrogen dioxide, carbon monoxide, or hydrocarbons; or any mercury retort; or any fuel-burning electric-generating facility of more than 250 kilowatts capacity.

Before either building or modifying any such facility, a permit applicant must submit plans and specifications with the following information:²⁸

1. Two sets of blueprints;
2. Maps of the immediate vicinity;
3. An engineering report outlining methods of operation, quantity and source of material processed, use and distribution of processed materials; and a process flow diagram indicating points of emission, including estimated quantities and types of contaminants emitted;
4. A description of any air quality control device;
5. An evaluation of the effect on surrounding ambient air; and

6. Plans for emission reduction during a pollution alert.

A permit will not be granted unless it is shown that the source will not interfere with the maintenance of any ambient air quality standard or violate any State air quality regulation.

A second type of new source review relates to so-called indirect sources of pollution. These are sources—like stadia, garages, airports, and highways—which attract mobile sources of pollution, mainly automobiles. Alaska has never adopted regulations for the review of indirect sources.²⁹ The 1977 amendments severely restricted the authority of the Administrator to require such review.³⁰ While a State may choose to undertake indirect source review, the Administrator cannot require any such plan or promulgate plans or regulations including such a program. The only exception is that the Administrator may promulgate regulations for an indirect source review of federally funded airports and highways and federally owned and operated indirect sources.

Preconstruction Review of Sources for Which New Source Standards of Performance Have Been Established

A State must perform a different preconstruction review for that class of stationary sources for which standards of performance have been established pursuant to section 111 of the Act.³¹ Before these sources can be built or modified, it must be shown that, in addition to not interfering with the attainment or maintenance of any standard, they also make use of the best available control technology for reducing pollution.

To prevent States from attracting new industry by offering “pollution havens,” Congress excluded control of these major air pollution sources from State implementation and directed EPA to set national standards. These EPA standards cover such mining-related sources as coal preparation plants, smelters, and electric-generating plants.³² Controversy related to mineral development

has centered on smelter and utility regulations, particularly because of the high cost of installing pollution control equipment.

The 1977 amendments established a process by which the Administrator must, within 4 years, promulgate standards for all other major stationary sources emitting pollution that may contribute significantly to air pollution.³³ It is possible that these new standards could include many other processes associated with mineral extraction, refining, and use.

Preconstruction Review in Nonattainment Areas

There are many AQCRs in nonattainment status with respect to one or more criteria pollutants (including two such instances in Alaska). For this reason, it would be impractical to forbid all new development in nonattainment areas. On the other hand, it would be both anomalous and economically discriminatory if complying areas were more restricted than nonattainment areas with respect to new source construction—a condition that may well have occurred in the recent past. The 1977 amendments added a new section to Title I of the Act that deals specifically with the problem of development in nonattainment areas.³⁴

This section extends the deadlines for meeting NAAQS to 1982 and 1987. Nonattainment areas are granted this extension only if they develop SIPS that are somewhat more detailed and constrained than those provided for in section 110. The main features of such a plan are:

1. A comprehensive, accurate current inventory of actual emissions from all sources;
2. A vehicle emission control inspection and maintenance program (only if seeking 1987 extension);
3. An analysis of alternative sites, sizes, production processes, and environmental control techniques for any proposed new source which demonstrates that

benefits significantly outweigh environmental and social costs (only if seeking 1987 extension);

4. Planning procedures involving State, regional, and local officials; and
5. A special permit provision.

The permit provision allows new source construction only where:³⁵

- a. By the time the facility commences operations, total emissions from it, existing sources, and new minor sources will be less than the total emissions from existing sources allowed under the plan required by the section;
- b. The source complies with the more stringent of the following:
 - i. The most stringent emission limitation required by any State for such a source, or
 - ii. The most stringent emission limitation achieved in practice by such a source; and
- c. The owner or operator of the source demonstrates that all other major stationary sources owned or operated by him in the State are subject to emission limitations and are in compliance.

The purpose of this provision is to combine technology-forcing requirements with adherence to a meaningful compliance schedule and to assure that the beneficiary of such a permit is not contributing to pollution elsewhere in the State. Failure to observe the stringent conditions of the implementation plan will result in the loss of both air pollution grants and Federal highway funds.³⁶

Citizen Suits on Preconstruction Review

State permits for construction of new stationary sources are subject to judicial review through citizens suits authorized by section 304 of the Clean Air Act.³⁷ Any citizen may challenge, in Federal court, the issuance of a State permit for the construction of a new source that will violate ambient air quality

standards. In order to prevail in the action, the plaintiff must show: (1) that the State review did not satisfy procedural requirements, e.g., conducting a review before construction started; (2) that the preconstruction review indicated that air quality violations would occur, but the permit was granted anyway; or (3) that the technical data (calculations and dispersion models), on which the State relied in determining that no violations would occur were incorrect.³⁸ A citizen may not sue for damages, but to enjoin an illegal act or to enforce an administrative authority to carry out a statutorily mandated action (in legal terms, a nondiscretionary duty).³⁹

PREVENTION OF SIGNIFICANT DETERIORATION

The development of measures to prevent the significant deterioration of air quality in existing clean air or nondegradation regions has been a controversial chapter in the Federal implementation of the Clean Air Act. In December 1974, the EPA issued final regulations to prevent the significant deterioration of air quality in areas cleaner than the NAAQS. These regulations were issued as a result of a 1973 Supreme Court decision⁴⁰ affirming lower court decisions that the Act intended not only that polluted air be upgraded to human health-related national standards, but also that air in regions cleaner than those standards should be protected. Under these regulations, the States were required to classify areas that met or exceeded national primary or secondary standards as: Class I where only a very small annual increment of degradation was allowed; Class II where a moderate annual increment was allowed; or Class III where degradation to national standards was permitted.

Opponents of the Court decision and the significant deterioration regulations argued that it was not the intent of Congress under the Clean Air Act to address any areas where national primary and secondary standards are being maintained. Advocates of industrial development, mining interests, and electrical

utilities charged that significant deterioration regulations will unduly restrict the Nation's continuing economic development. They argued that air pollution levels in existing "clean" areas should be permitted to increase to the national ambient air standards.

The Clean Air Act Amendments of 1977 expanded the nondegradation program and generally tightened the standards for prevention of significant deterioration. The goals of the nondegradation amendments are:⁴¹

1. To protect public health and welfare from any actual or potential adverse effect, which in the Administrator's judgment, may reasonably be anticipated to occur from air pollution or from exposures to pollutants in other media, which pollutants originate as emissions to the ambient air, notwithstanding attainment and maintenance of all national ambient air quality standards;
2. To preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value;
3. To ensure that economic growth will occur in a manner consistent with the preservation of existing clean air resources;
4. To assure that emissions from any source in any State will not interfere with any portion of the applicable implementation plan to prevent significant deterioration of air quality for any other State; and
5. To assure that any decision to permit increased air pollution in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decisionmaking process.

The amendments further provide that all SIPS must contain emissions limitations and other measures necessary to prevent the significant deterioration of air quality in each region which, on the basis of available information, cannot be classified for ambient air

quality levels of particulate or sulfur oxides; or which has ambient air quality levels above any national primary or secondary air quality standards (other than for sulfur oxides or particulate matter); or for which there is insufficient information to be classified as not meeting such national primary standards.⁴² All existing international parks, national wilderness areas of over 5,000 acres, national memorial parks of over 5,000 acres, and national parks of over 6,000 acres were immediately designated as Class I areas, and their status cannot be changed. There are 158 mandatory Class I areas,⁴³ four of which are in Alaska: Mount McKinley National Park, 1,939,493 acres; Bering Sea Wilderness, 41,113 acres; Simeonoff Wilderness, 25,141 acres; and Tuxedni Wilderness, 6,402 acres. Other areas previously designated as Class I under the EPA regulations promulgated before the 1977 amendments were also immediately designated as Class 1.⁴⁴ These areas, however, may be redesignated by the States under procedures set forth in the Act. All other areas, (identified under sections 107(d)(1)(D) or (E)) will be Class II and maybe redesignated as provided.

The amendments specify the maximum allowable increase in concentration for sulfur oxides and particulate matter (in micrograms per cubic meter) for each class. A ceiling was established⁴⁵ for other air pollutants. The maximum allowable concentration in any nondegradation area must not exceed a concentration for each pollutant for each period of exposure, equal either to the concentration permitted under the national secondary ambient air quality standard or to the concentration permitted under the national primary air quality standard, whichever is lower.

The Governor of each State with an EPA approved implementation plan may, after holding public hearings, issue orders excluding certain pollutants from being counted in determining compliance with nondegradation standards. These excluded pollutant concentrations include: stationary source emissions resulting from converting from the use

of natural gas or petroleum products under orders issued under provisions of the Energy Supply and Environmental Coordination Act of 1974⁴⁶ or from a natural gas curtailment plan; particulate matter attributable to construction or other temporary emissions activities; and emissions from new sources outside the United States. Such orders by State Governors become effective after submission to and approval by the EPA Administrator.

The amendments also provide that, except for lands within the boundaries of Indian reservations, a State may redesignate any areas as Class I that it deems appropriate. Other Federal areas may be redesignated only as Class I or Class 11. These include:

- a. Any national monument, national primitive area, national preserve, national recreation area, national wild and scenic river, national wildlife refuge, or national lakeshore exceeding 10,000 acres in size;⁴⁷ and
- b. Any national park or wilderness area exceeding 10,000 acres, and established after the enactment of the Clean Air Act Amendments of 1977.⁴⁸

Most of the large blocks of Alaska Lands that would be transferred into conservation units by pending legislation could be redesignated by the State. They are not mandatory Class I areas. They are now and will on transfer be Class II lands and they may not be designated as Class III under any conditions. They are not required to be designated Class I.

Any other clean air areas may be redesignated as Class III if:⁴⁹

1. The Governor specifically approves the redesignation after consultation with appropriate legislative representatives and with final approval of local government units representing a majority of the residents of the area to be redesignated;
2. The redesignation will not raise or contribute to any pollutant level to exceed the maximum allowable increment or

ceiling concentration permitted under classification of any other area; and

3. Other procedural and substantive requirements for redesignation under State and Federal law are satisfied.

The Clean Air Act amendments set forth requirements for State redesignation procedures. Prior to redesignation of any area as Class I, II, or III, the State must:⁵⁰

- (i) Have an approved SIP;
- (ii) Prepare a satisfactory description and analysis of economic, social, health, environmental, and energy effects of the proposed redesignation, and make such analysis available to the public;
- (iii) Require redesignation authorities to review and examine the effects document;
- (iv) Provide public notice and public hearings in areas to be redesignated and areas affected by redesignation;
- (v) Provide that the plans of any new or modified major emitting facility that may be permitted to be constructed or operate under Class III designation only, must be made available to the public prior to the hearing and redesignation pursuant to regulations issued by the EPA; and
- (vi) Before public notice and hearing, notify the appropriate Federal land manager if a proposed redesignation includes any Federal lands, and allow adequate opportunity for comment and recommendations (not more than 60 days). The State must publish any inconsistency between the redesignation and the recommendations of the Federal land manager with the reasons for such inconsistency.

The EPA Administrator may disapprove any redesignation only if he finds, after public notice and hearing, that the procedural requirements were not satisfied.⁵¹

Preconstruction Permitting of Major Emitting Facilities

Section 165 of the Clean Air Act,⁵² as amended, requires that any major emitting facility in a nondegradation area on which construction is started after the passage of the 1977 amendments must obtain a permit. The applicant must demonstrate that emissions from the new facility will not exceed or contribute to air pollution in excess of the maximum allowable concentrations for any pollutant in any clean air area, more than once per year, nor exceed NAAQS or other applicable emission control standards issued under the Clean Air Act in any AQCR.⁵³

The applicant for the proposed new facility must utilize the best available control technology for each regulated pollutant either emitted or resulting from the facility. Appropriate monitoring procedures must be carried out to measure the impacts of emissions in affected areas. The air quality impacts arising from any growth associated with such a facility must also be analyzed. Permit applications are to be granted or denied within 1 year after the completed application has been filed. A review must include the required analysis, consultation with appropriate Federal officials, and public notice and hearing.

For Class I areas, the permit must have the approval of the appropriate Federal land manager. A permit will be issued if it has been shown that the proposed emissions will not adversely affect the air quality and related values of the Federal Class I area. A permit may also be issued for an emitting facility that would exceed the maximum allowable increments if the Federal land manager certifies that the emissions would have no adverse impact on the values of the Class I area.

The permit applicant may request a variance from the State Governor if a Federal land manager refuses a certification that the emissions from a proposed facility will have no adverse impact on the air quality and related values of a Federal Class I area even

though the emissions would cause or contribute to concentrations that exceed Class I maximum allowable increments. The applicant must demonstrate, and the Governor must find, that the proposed facility cannot be built without the variance, and that in Federal Class I mandatory areas, the variance will not adversely affect the air quality in the region. Before granting a variance, the Governor must consider the Federal land manager's recommendations and obtain his concurrence. If the Governor recommends a variance for a Federal mandatory Class I area contrary to the recommendation of a Federal land manager, both the Governor's recommendation and that of the Federal land manager are to be transmitted promptly to the President. The President may approve the variance if he finds that it is in the national interest. He must act in 90 days to either affirm or deny the variance, and his decision is final and nonreviewable.⁵⁴

Any facility operating under a variance may exceed the maximum allowable increment for sulfur oxides on not more than 18 days per year, but those emissions may not exceed statutorily specified numerical limits.⁵⁵ The 1977 amendments set specific numerical maximum allowable increases for sulfur oxides and particulate matter. Procedures for establishing regulations for other pollutants are set forth in section 166(a) of the amended Clean Air Act.⁵⁶

Within 2 years of enactment of the 1977 amendments, EPA is to propose regulations for preventing significant deterioration resulting from nitrogen oxides, hydrocarbons, carbon monoxide, and photochemical oxidants. These regulations would not go into effect for 1 year. At the end of that year, a revision of SIPS would begin unless there is congressional action to the contrary.

The Administrator is required to report to Congress if he finds that establishing and implementing regulations to prevent significant deterioration caused by the criteria pollutants would present special difficulties or be impractical. This report does not delay the

Administrator's duty to proceed with the regulations. The States may adopt strategies other than increments if they accomplish the purpose of maintaining air quality. The proposed EPA regulations will provide:

- a. Specific numerical measures against which permits may be tested;
- b. A framework for stimulating improved control technology;
- c. Protection of air quality and related values; and
- d. Fulfillment of the goals set forth in the purposes provision of the Act.

Regulations for new air quality standards are to be followed within 2 years by measures to prevent significant deterioration.⁵⁷ The States and the EPA Administrator are authorized to take enforcement action to prevent the construction of any major emitting facility that does not meet the permitting requirements and that is proposed to be constructed in a "clean air" area not subject to an approved implementation plan.⁵⁸

DUTIES OF THE FEDERAL LAND MANAGER

Federal land managers⁵⁹ and the Federal official directly managing Federal lands have an "affirmative responsibility" to protect air quality and related values, such as visibility, for any Federal land in a Class I area.⁶⁰ Under the 1977 amendments to the Clean Air Act, Federal land managers are afforded an opportunity to comment and make recommendations on proposed State redesignations.⁶¹ Federal land managers and Federal officials with direct responsibility for managing Federal lands are notified by the EPA of any permit application for a major emitting facility that may affect Federal lands within a Class I area.⁶² The Federal land manager or official must notify the EPA Administrator if the emissions from the proposed facility would cause or contribute to a change in the air quality in the area and identify the potential adverse impacts of such a change.⁶³

A permit for a major emitting facility may be denied if emissions would exceed the maximum allowable increment for a Class I area, or would have an adverse impact on air quality in the Federal Class I area even though the maximum allowable increase is not exceeded.⁶⁴ If, however, the Federal land manager certifies that the facility would not adversely affect the air quality and related values of the Federal Class I area, a permit may be issued despite the fact that the emissions may exceed the maximum allowable increases for sulfur oxides and particulates.⁶⁵ In such circumstances, the Clean Air Act Amendments specify alternative maximum allowable increases for these pollutants, which cannot be exceeded.⁶⁶

The Federal land manager must review all national monuments, primitive areas, and national preserves and recommend appropriate areas for redesignation as Class I where air quality and related values are important attributes of the area.⁶⁷ The Federal land manager shall report to Congress and the State in 1 year, and shall consult with the State before making such recommendation.

Under section 169A, the Department of the Interior must prepare an inventory of all

mandatory Class I areas where visibility is an important value.⁶⁸ The Secretary of the Interior has found that visibility is an important value in 156 of the 158 mandatory Class I areas (the two exceptions are Bradwell Bay, Fla., and Rainbow Lake, Wis., both wilderness areas).⁶⁹ The inventory has been forwarded to the EPA administrator who will use it in developing a report and recommendation to Congress.⁷⁰ It will also be used for promulgating regulations to meet the statutory goal of "prevention of any future and remedying of any existing, impairment of visibility in mandatory Federal Class I areas"⁷¹ resulting from manmade pollution.

By February 1980, the EPA Administrator is required to promulgate regulations to prevent future, and to remedy existing, impairments of visibility in mandatory Class I areas. The regulations shall provide guidelines to the States and require revision of implementation plans to include requirements for installation of the best available retrofit technology on existing sources that are less than 15 years old.⁷² Any exemption from the requirement for retrofit technology requires the approval of the appropriate Federal land manager.⁷³

FOOTNOTE REFERENCES FOR CLEAN AIR ACT

¹The Clean Air Act, 42 U.S.C. 7401 et seq. (redesignated from 42 U.S.C. 1857 et seq.) includes the Clean Air Act of 1963, Public Law 88-206 (Dec. 17, 1963), and amendments made by the Motor Vehicle Air Pollution Control Act, Public Law 89-272 (Oct. 20, 1965), the Clean Air Act Amendments of 1966, Public Law 89-675 (Nov. 21, 1967), the Clean Air Act Amendments of 1970, Public Law 91-604 (Dec. 31, 1970), the Comprehensive Health Manpower Training Act of 1971, Public Law 92-157 (Nov. 18, 1971), the Energy Supply and Environmental Coordination Act of 1974, Public Law 93-319 (June 22, 1974), and the Clean Air Act Amendments of 1977, Public Law 95-95 (Aug. 7, 1977). The major components of the Clean Air Act are the Clean Air Act Amendments of 1970 and the Clean Air Act Amendments of 1977.

²Section 108 of the Clean Air Act, as added by Public Law 91-604, section 48(a), 84 Stat. 1678, Dec. 31, 1970, directed the Administrator of EPA to publish a list of

pollutants which had an adverse effect on the public health and welfare and whose presence in the ambient air resulted from numerous or diverse mobile or stationary sources. Criteria documents were prepared reflecting the latest scientific knowledge on the effect of five pollutants on the public health and welfare. National ambient air quality standards were developed for six pollutants associated with the criteria pollutants. Sulfur oxides are measured by sulfur dioxide, and photochemical oxidants are measured by ozone and hydrocarbons.

³This discussion is limited to Title I, "Air Pollution Control and Prevention," and Title III, "Administration," of the Clean Air Act. The description of programs under the Act does not include any authorized by Title H, "Emissions Standards for Moving Sources."

⁴Public Law 93-319, 88 Stat. 246, June 22, 1974, 15 U.S.C. 791-798.

⁵*Environmental Quality-1976*, Report of the Council on Environmental Quality, p. 2.

⁶U.S. Congress, House Subcommittee on Energy and Power, Middle- and Long-Term Energy Policies and Alternatives, Appendix, 94th Cong., 2d sess., March 1976, at 4.

⁷*Air Quality and Stationary Source Emission Control*, A Report by the Commission on Natural Resources, National Academy of Sciences, prepared for the Committee on Public Works, Serial No. 94-4, (March 1975), at 5-195.

⁸*Sierra Club v. Ruckelshaus*, 344 F. Supp. 253 (1972), aff'd per curiam, 4 ERC 1915 (D.C. Cir. 1972), aff'd sub nom., *Fri v. Sierra Club*, 412 U.S. 541 (1973).

⁹EPA's PSD policy is set forth at 40 CFR 52.21 (1977). Some aspects of that policy have already been revised to reflect the 1977 amendments, 43 F.R. 57459, Nov. 3, 1977, and EPA has published proposed rules to reflect other changes made by the amendments, 42 F.R. 57471, 57479, Nov. 3, 1977.

¹⁰"Stationary source is defined as "any building, structure, facility or installation which emits or may emit any air pollutant," section 11 l(a)(3), 42 U.S.C. 7411 (a)(3).

¹¹The standards are set forth at 40 CFR 50.4-50.11.

¹²The boundaries of Alaska's four air quality control regions are set out at 40 CFR 81.54 (Cook Inlet Intrastate AQCR); 40 CFR 81,246 (Northern Alaska Intrastate AQCR); 40 CFR 81,247 (South Central Alaska Intrastate AQCR); and 40 CFR 81.248 (Southeastern Alaska Intrastate AQCR).

¹³Alaska Attainment Status, 40 CFR 81.302.

¹⁴Arizona Attainment Status, 40 CFR 81.303; attainment status for all areas may be found at 40 CFR Part 81, Subpart C—Section 107 Attainment Status Designations, 43 F.R. 8963, Mar. 3, 1978.

¹⁵43 F.R. 8963, Mar. 3, 1978.

¹⁶42 U.S.C. 7410.

¹⁷40 CFR 51.11.

¹⁸*Progress in the Prevention and Control of Air Pollution in 1976*, Annual Report of the U.S. Environmental Protection Agency, (1977), p. 31.

¹⁹Public Law 95-95, sections 108(a)(3) and (a)(4), amending sections 110(a)(2)(D) and 110(a)(2)(E), 42 U.S.C. 7410(a)(2)(D) and 7410(a)(2)(E).

²⁰Compliance with this provision will require a change in the existing permit provision of Alaska Law, 18 A.A.C. 50.120.

²¹Section 110(C)(1), 42 U.S.C. 7410(C)(1).

²²Such promulgations with respect to the Alaskan Implementation Plan can be found at 40 CFR 52.70.

²³40 CFR 52.02, 52.06.

²⁴EPA, however, has decided to exempt surface mining operations, including haul roads, from mandatory PSD review, 43 F.R. 26397, June 19, 1978. This decision was based on an EPA finding that particulate loadings associated with these sources consisted predominantly of nonrespirable particles, EPA is in the process of gathering information to determine whether or not to revise its overall Total Suspended Particulate (TSP)

standard to emphasize the risks to human health associated with smaller, respirable particulate. See EPA, Fugitive Dust Policy; SIP's and New Source Review, Aug. 1, 1977. The EPA decision to exempt fugitive dust from surface mining operations and haul roads from mandatory PSD review has been challenged in court,

²⁵The 1977 amendments define, for the first time in the statute, major sources, as follows:

(j) Except as otherwise expressly provided, the terms 'major stationary source' and 'major emitting facility' mean any stationary facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant (including any major emitting facility or source of fugitive emissions of any such pollutant, as determined by rule by the Administrator). Public Law 95-95, section 301(a), adding a new section 302(j) to the Act, 91 Stat. 770.

Throughout the Clean Air Act, requirements placed on new major sources also apply to modifications and additional construction of existing facilities which are major sources.

²⁶40 CFR 51.18.

²⁷18 A.A.C. 50.120. The permit provisions also apply to the operation of existing facilities.

²⁸18 A.A.C. 50.120(f).

²⁹40 CFR 52.78.

³⁰Public Law 95-95, section 108(e) adding a new section 110(a)(5) to the Act, 91 Stat. 695, 42 U.S.C. 7410 (a)(5).

³¹Standards of performance may be found at 40 CFR 60.

³²Section 111; 42 U.S.C. 1711.

³³Public Law 95-95, section 109(a) adding a new section 11 l(f)(1) to the Act establishes this timetable, 91 Stat. 697, 42 U.S.C. 741 l(f)(1).

³⁴Public Law 95-95, section 129, 91 Stat. 745.

³⁵Section 173, 42 U.S.C. 7503.

³⁶Section 176, 42 U.S.C. 7506.

³⁷National Resources Defense Council, *Land Use Controls in the United States*, A Citizens Handbook, 1976, pp. 44-45.

³⁸*Id.* at 45.

³⁹*Id.* at 64.

⁴⁰*Sierra Club v. Ruckelshaus*, 344 F. Supp. 253, (D.D.C. 1972), aff'd per curiam, 4 ERC 1915 (D.C. Cir. 1972), aff'd by an equally divided court sub nom. *Fri v. Sierra Club*, 412 U.S. 541, (1973).

⁴¹The amendments on PSD are continued in section 127 of Public Law 95-95 which adds chapter C to Title I of the Clean Air Act containing new sections 160 to 169, 43 U.S.C. 7470-7479. The quoted language is in section 160, 43 U.S.C. 7470.

⁴²Public Law 95-95, section 127(a) adding a new section 161 to the Act, 91 Stat. 731, 42 U.S.C. 7471.

⁴³Mandatory Federal Class I areas are listed at 42 F.R. 54760, Nov. 3, 1977.

The following list identifies those Federal lands which are mandatory Class I areas established by the

1977 Clean Air Act Amendments. These lands may not be redesignated. Total acreage is shown for each area. States in parentheses indicate interstate park or wilderness areas; total acreage is listed for only one of the States involved.

NATIONAL PARKS OVER 6,000 ACRES

Alaska—Mount McKinley 1,939,493,
 Arizona—Grand Canyon 1,176,913; Petrified Forest 93,493.
 California—Kings Canyon 459,994; Lassen Volcanic 105,800; Redwood 27,792; Sequoia 286,643; Yosemite 759,172,
 Colorado—Mesa Verde 51,488; Rocky Mountain 263,138.
 Florida—Everglades 1,397,429.
 Hawaii—Haleakala 27,208; Hawaii Volcanoes 217,029.
 Idaho—Yellowstone (Wyoming).
 Kentucky—Mammoth Cave 51,303.
 Maine—Acadia 37,503.
 Michigan—Isle Royale 542,428,
 Minnesota—Voyageurs 114,964,
 Montana—Glacier 1,012,599; Yellowstone (Wyoming).
 New Mexico—Carlsbad Caverns 46,435.
 North Carolina—Great Smoky Mountains (Tennessee).
 Oregon—Crater Lake 160,290.
 South Dakota—Wind Cave 28,060.
 Tennessee—Great Smoky Mountains 514,757.
 Texas—Big Bend 708,118; Guadalupe Mountains 76,292.
 Utah—Arches 65,098; Bryce Canyon 35,832; Canyonlands 337,570; Capitol Reef 221,896; Zion 142,462.
 Virgin Islands—Virgin Islands 12,295.
 Virginia—Shenandoah 190,535.
 Washington—Mount Rainier 235,239; North Cascades 503,277; Olympic 892,578.
 Wyoming—Grand Teton 305,504; Yellowstone 2,219,737.

NATIONAL WILDERNESS AREAS OVER 5,000 ACRES

Alabama—Sipsey 12,646,
 Alaska—Bering Sea 41,113; Simeonof 25,141; Tuxedni 6,402.
 Arizona—Chiricahua National Monument 9,440; Chiricahua 18,000; Galiuro 52,717; Mazatzal 205,137; Mt. Baldy 6,975; Pine Mountain 20,061; Saguaro 71,400; Sierra Ancha 20,850; Superstition 124,117; Sycamore Canyon 47,757.
 Arkansas—Caney Creek 14,344; Upper Buffalo 9,912.
 California—Agua Tibia 15,934; Caribou 19,080; Cucamonga 9,022; Desolation 63,469; Dome Land 62,206; Emigrant 104,311; Hoover 47,916; Joshua Tree 492,690; John Muir 484,673; Kaiser 22,500; Lava Beds 28,640; Marble Mountain

2 13,743; Minarets 109,484; Monkelumne 50,400; Pinnacles 12,952; Point Reyes 25,370; San Gabriel 36,137; San Geronio 34,644; San Jacinto 20,564; San Rafael 142,722; South Warner 68,507; Thousand Lakes 15,695; Ventana 95,152; Yolla-Belly-Middle Eel 109,091.

Colorado—Black Canyon of the Gunnison 11,180; Eagles Nest 133,910; Flat Tops 235,230; Great Sand Dunes 33,450; La Garita 48,486; Maroon Bells-Snowmass 71,060; Mt. Zirkel 72,472; Rawah 26,674; Weminuche 400,907; West Elk 61,412.

Florida—Bradwell Bay 23,432; Chassahowitzka 23,360; Saint Marks 17,746.

Georgia—Cohutta 33,776; Okefenokee 343,850; Wolf Island 5,126.

Idaho—Craters of the Moon 43,243; Hells Canyon (Oregon) 193,840; Sawtooth 216,383; Selway-Bitterroot (Montana) 1,240,618.

Louisiana—Breton 5,000.

Maine—Moosehorn 7,501.

Michigan—Seney 25,150.

Minnesota—Boundary Waters Canoe Area 747,840.

Missouri—Hercules-Glades 12,315; Mingo 8,000.

Montana—Anaconda-Pintlar 157,803; Bob Marshall 950,000; Cabinet Mountains 94,272; Gates of the Mountain 28,562; Medicine Lake 11,366; Mission Mountains 73,877; Red Rock Lakes 32,350; Scapegoat 239,295; Selway-Bitterroot-U.L. Bend 20,890.

Nevada—Jarbridge 64,667.

New Hampshire—Great Gulf 5,552; Presidential Range-Dry River 20,000.

New Jersey—Brigantine 6,603.

New Mexico—Bandelier 23,267; Bosque del Apache 30,850; Gila 433,690; Pecos 167,416; Salt Creek 8,500; San Pedro Parks 41,132; Wheeler Peak 6,027; White Mountain 31,171.

North Carolina—Joyce Kilmer-Slickrock 14,033; Linville Gorge 7,575; Shining Rock 13,350; Swanquarter 9,000.

North Dakota—Lostwood 5,577.

Oklahoma—Wichita Mountain 8,900.

Oregon—Diamond Peak 36,637; Eagle Cap 293,476; Gearhart Mountain 18,709; Kalmiopsis 76,900; Mountain Lakes 23,071; Mount Hood 14,160; Mount Jefferson 100,208; Mount Washington 46,116; Strawberry Mountain 33,003; Three Sisters 199,902.

South Carolina—Cape Remain 28,000.

South Dakota—Badlands 64,250.

Tennessee—Joyce Kilmer-Slickrock (North Carolina), Vermont—Lye Brook 12,430.

Virginia—James River Face 8,703.

Washington—Alpine Lakes 303,508; Glacier Peak 464,258; Goat Rocks 82,680; Mount Adams 32,356; Pasayten 505,524.

West Virginia—Dolly Sods 10,215; Otter Creek 20,000.

Wisconsin—Rainbow Lake 6,338.

Wyoming—Bridger 392,160; Fitzpatrick 191,103; North Absaroka 35 I,104; Teton 557,311; Washakie 686,584.

INTERNATIONAL PARKS

New Brunswick, Canada—Roosevelt-Campobello 2,721.

NATIONAL MEMORIAL PARKS

North Dakota—Theodore Roosevelt National Memorial Park 69,675.

⁴⁴Public Law 95-95, section 127(a) adding a new section 162(a) to the Act, 91 Stat. 731,42 U.S.C. 7472 (a).

⁴⁵Public Law 95-95, section 127(a) adding a new section 163 to the Act, 91 Stat. 732,42 U.S.C. 7473.

⁴⁶15 U.S.C. 792.

⁴⁷Public Law 95-95, section 127(a) adding a new section 164(a)(l) to the Act, 91 Stat. 733, 42 U.S.C. 7474 (a)(l).

⁴⁸Public Law 95-95, section 127(a) adding a new section 164(a)(2) to the Act, 91 Stat. 734, 42 U.S.C. 7474 (a)(2).

⁴⁹Public Law 95-95, section 127(a) adding new Sections 164(a)(2)(A), 164(a)(2)(B) and 164(a)(2)(C), 91 Stat. 734, 42 U.S.C. 7474 (a)(2)(A), 7474 (a)(2)(B), and 7474(a)(2)(C).

⁵⁰Public Law 95-95, section 127(a) adding a new section 164(b)(l) to the Act, 91 Stat. 734, 42 U.S.C. 7474 (b)(l).

⁵¹Public Law 95-95, section 127(a) adding a new section 164(b)(2) to the Act, 91 Stat. 735, 42 U.S.C. 7474 (b)(2).

⁵²Public Law 95-95, section 127(a) adding a new section 165 to the Act, 91 Stat. 735,42 U.S.C. 7475.

⁵³Section 169 defines a major emitting facility for the purposes of provisions relating to the prevention of significant deterioration:

The term “major emitting facility” means any of the following: stationary sources of air pollutants which emit, or have the potential to emit, one hundred tons per year or more of any air pollutant from the following types of stationary sources: fossil-fuel fired steam electric plants of more than two hundred and fifty million British thermal units per hour heat input, coal-cleaning plants (thermal dryers), kraft pulp mills, Portland Cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than two hundred and fifty tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, coke oven batteries, sulfur recovery plants, petroleum refineries lime plants, phosphate rock processing plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production facilities, chemical process plants,

fossil-fuel boilers of more than two hundred and fifty million British thermal units per hour heat input, petroleum storage and transfer facilities with a capacity exceeding three hundred thousand barrels, taconite ore-processing facilities, glass-fiber processing plants, charcoal production facilities. Such term also includes any other source with the potential to emit two hundred and fifty tons per year or more of any air pollutant. This term shall not include new or modified facilities which are nonprofit health or education institutions which have been exempted by the State.

Public Law 95-95, section 127(a), 91 Stat. 740,42 U.S.C. 7479(l).

⁵⁴Public Law 95-95, section 127(a) adding a new section 165(d)(2)(D)(ii) to the Act, 91 Stat. 737, 42 U.S.C. 7475(d)(2)(D)(ii).

⁵⁵Public Law 95-95, section 127(a) adding a new section 165(d)(2)(C)(iv) to the Act, 91 Stat. 737, 42 U.S.C. 7475(d)(2)(C)(iv).

⁵⁶Public Law 95-95, section 127(a) adding a new section 166(a) to the Act, 91 Stat. 739,42 U.S.C. 7476.

⁵⁷Public Law 95-95, section 127(a) adding a new section 166(d) to the Act, 91 Stat. 739,42 U.S.C. 7476(d).

⁵⁸Public Law 95-95, section 127(a) adding a new section 167 to the Act, 91 Stat. 740,42 U.S.C. 7477.

⁵⁹Public Law 95-95, section 301(a), adding a new section 302(i) to the Act which reads: The term ‘Federal land manager’ means, with respect to any lands in the United States, the Secretary of the Department with authority over such lands. 91 Stat. 770,42 U.S.C. 7602(i).

⁶⁰Public Law 95-95, section 127(a) adding a new section 165(d)(2)(B) to the Act, 91 Stat. 736, 42 U.S.C. 7475 (d)(2)(B).

⁶¹Public Law 95-95, section 127(a) adding a new section 164(b)(l)(B) to the Act, 91 Stat. 735, 42 U.S.C. 7474 (b)(l)(B).

⁶²Public Law 95-95, section 127(a) adding a new section 165(d)(2)(A) to the Act, 91 Stat. 736, 42 U.S.C. 7475 (d)(2)(A).

⁶³Public Law 95-95, section 127(a) adding a new section 165(d)(2)(C) to the Act, 91 Stat. 737, 42 U.S.C. 7475 (d)(2)(C).

⁶⁴Public Law 95-95, section 127(a) adding a new section 165(d)(2)(C)(ii) to the Act, 91 Stat. 737, 42 U.S.C. 7475(d)(2)(C)(ii).

⁶⁵Public Law 95-95, section 127(a) adding a new section 165(d)(2)(C)(iii) to the Act, 91 Stat. 737, 42 U.S.C. 7475(d)(2)(C)(iii).

⁶⁶Public Law 95-95, section 127(a) adding a new section 164(d)(2)(C)(iv) to the Act, 91 Stat. 737, 42 U.S.C. 7475(d)(2)(C)(iv).

⁶⁷Public Law 95-95, section 127(a) adding a new section 164(d) to the Act, 91 Stat. 736,42 U.S.C. 7475(d).

⁶⁸Public Law 95-95, section 128(a), adding a new section 169 A(a)(2) to the Act, 91 Stat. 742, 42 U.S.C. 7491 (a).

⁶⁹Final Identification of Mandatory Federal Class I Areas Where Visibility Is an Important Value, 43 F.R. 7721, Feb. 21, 1978.

⁷⁰Public Law 95-95, section 128(a) adding a new section 169 A(a)(3) to the Act, 91 Stat. 742, 42 U.S.C. 7491 (a)(3).

⁷¹Public Law 95-95, section 128(a) adding a new section 169 A(a)(1) to the Act, 91 Stat. 742, 42 U.S.C. 7491 (a)(1).

⁷²Public Law 95-95, section 128(a) adding a new section 169A(b), 91 Stat. 743, 42 U.S.C. 7491(b).

⁷³Public Law 95-95, section 128(a) adding a new section 169A(c)(3), 91 Stat. 743, 42 U.S.C. 7491(c)(3).

CLEAN WATER ACT

Federal concern with water pollution abatement dates from the Rivers and Harbors Act of 1899,¹ which authorized the U.S. Army Corps of Engineers to issue permits for the discharge of material into navigable waterways if “anchorage and navigation will not be injured thereby.” It was not until the Water Quality Act of 1965,² however, that Congress addressed the issue of water quality. This Act required that States adopt and meet water quality criteria (subject to Federal approval) for interstate waters within their boundaries. In the absence of State action, the criteria would be set by the Federal Government, which would exercise abatement authority. This approach to pollution control has similarities to that taken by the Clean Air Act. The standards relate to the results of actions by many individual pollution sources, but do not directly regulate those sources.

The Federal Water Pollution Control Act Amendments of 1972³ (FWPCA) substantially restructured the Federal water pollution control program. The purpose of the amendments was to control pollution at its source by requiring water polluters to limit the amount of effluent discharged into a body of water. The Act establishes a permit system—the National Pollutant Discharge Elimination System (NPDES)—to oversee the installation of specified levels of pollution abatement equipment for all point sources of pollution, regardless of the water quality of adjacent bodies of water. (A point source is one that discharges effluent through a conduit or pipe.) The water quality standard program is also continued. More stringent effluent restrictions may be imposed if the source empties into a body of water that does not meet water quality standards.

Some mining activities constitute point sources of pollution that require NPDES permits. Effluent limitations and standards of performance have been established for cer-

Note: Footnotes for this section appear on pp. 195-197.

tain mining activities. The Environmental Protection Agency (EPA) will develop guidelines for other categories of mining operations in the near future.⁴

Many mining operations and procedures associated with access to mineral sites, such as roadbuilding and construction activities, are not point sources and do not require NPDES permits. Areawide water treatment management programs administered by States and other local units of Government, pursuant to section 208 of FWPCA, could potentially affect those mining development and operation activities that are nonpoint sources of pollution. Because EPA originally limited areawide plans to metropolitan areas, until forced to extend them by court order,⁵ section 208 has not as yet had any effect on mining activities. State submission of water quality management plans was not required until November 1, 1978.

Many activities related to mineral development such as processing, refining, and power generating may be directly affected by the permit system. But, because implementation of FWPCA has been slow, it is difficult to judge future impacts from experience during its early years. In addition, the amendments introduced by the Clean Water Act of 1977,⁶ make extrapolation difficult.

FEDERAL WATER POLLUTION CONTROL ACT

The Federal Water Pollution Control Act Amendments of 1972 established a complex program to clean up the Nation's waterways. Where previous legislation had concentrated on establishing broad water quality standards,⁷ FWPCA sought to place individualized, technological requirements on all polluters, and to upgrade these requirements until the ultimate goal of zero pollution discharge into navigable waters would be achieved.

The stated objective of the Act is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters. “a To achieve this objective, six national goals and policies are set forth:⁹

1. The national goal that the discharge of pollutants into navigable waters be eliminated by 1985;
2. The national goal that, wherever attainable, an interim goal of water quality which provides for the propagation of fish, shellfish, and wildlife; and provides for recreation in and on water, be achieved by July 1, 1983;
3. The national policy that discharge of toxic pollutants in toxic amounts be prohibited;
4. The national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;
5. The national policy that areawide waste treatment planning processes be developed and implemented to assure adequate control of sources of pollution in each State; and
6. The national policy that a major research and demonstration effort be made to develop the technology necessary to eliminate the discharge of pollutants into the navigable waters, the waters of the contiguous zones, and the oceans.

FWPCA authorized Federal and State regulatory programs and a large construction grant program designed to meet a series of deadlines for improving water quality contained in the Act. The EPA and the Army Corps of Engineers have the primary Federal responsibility for enforcement and implementation. State cooperation and planning is also an essential component of the total effort.

Many of the water quality deadlines have not been met. The Council on Environmental Quality (CEQ) characterized progress under the Act as follows :¹⁰

This period has been one of high expectation and significant frustration. Water quality has not improved as rapidly as we had hoped, and there are still substantial delays in fully implementing many sections of the Act.

Two different approaches to controlling sources of pollution are found in the Act. They arise from the fundamental distinction, both in legal and in practical terms, between point and nonpoint sources of pollution. A point source is any confined, discrete conveyance such as a pipe, a ditch, or even a floating craft. ” Point sources release a collected stream of pollutants through sewers, pipes, ditches, and other channels. Such streams can be measured and regulated with some precision. They provide a ready locus for the application of technology to control and purify effluents. Nonpoint sources are sites from which there is uncollected runoff, Agricultural areas, mining operations, and construction sites are typical examples of nonpoint sources. They present highly complex regulatory and technological difficulties, and are subject to less stringent legal controls.

The 1972 Act established the following regulatory scheme to control pollution from point sources:

1. By July 1977, all dischargers other than municipal sewage treatment plants must have achieved the effluent limitations based on the “best practicable pollution control technology currently available” (BPT), and public treatment works must have achieved limitations based on secondary treatment .^{*2}
2. By July 1983, nonmunicipal point sources must have in operation the “best available technology economically achievable” (BAT), and municipal sewage treatment plants must have installed the “best practicable waste treatment technology.”¹³
3. Special effluent standards for toxic water pollutants based solely on environmental and safety considerations must be met prior to the 1977 deadline.¹⁴

4. New facilities and installations must meet standards of performance based on the "best available demonstrated control technology."¹⁵
5. Special effluent restrictions, based on water quality standards, must be used whenever it becomes apparent that the application of national standards will not meet water quality targets in a given basin.¹⁶

It is estimated that the 1977 deadlines were met by 90 percent of industrial polluters, but by only 40 percent of municipalities.¹⁷ The control of toxic pollutants was less effective; EPA had failed to publish toxic effluent guidelines and was under court order to develop regulations for 65 toxic pollutants.¹⁸

The failure to meet the 1977 deadlines, coupled with new information about the effects of less stringently regulated nonpoint sources on water quality, raised questions about the requirement to implement strict BAT standards by 1983. The National Commission on Water Quality—established by section 315 of FWPCA—issued a report that recommended extending the 1977 requirement and postponing the 1983 goals and requirements for at least 5 years.¹⁹ Two other aspects of the pollution control program—the sewage treatment construction grant program and the dredge and fill permit program administered by the Corps of Engineers (the 4041 program)—were also subjects of intense criticism. These programs, along with the BPT and BAT requirements, were viewed as placing unrealistic burdens on those sources covered by the Act.

Congress responded to many of these problems with the Clean Water Act of 1977,²⁰ which significantly amended FWPCA. The amended law further refines the existing regulatory scheme and places increased importance on the control of toxic effluents. On the whole, the 1977 amendments provided midcourse corrections rather than major changes in goals or objectives.

PERMIT SYSTEM

Permits implement the various standards found in the Act and in regulations; they are also used as enforcement devices. A permit, issued under section 402, which established the National Pollutant Discharge Elimination System (NPDES), is required before any pollutant (other than dredge and fill materials covered by section 4041) may be discharged from a point source into navigable waters.

A permit requires the discharger of pollutants to meet the applicable effluent limitations, technology standards, and water quality goals. Permits are obtained through the local EPA office or from the State, if the latter has qualified to take over the regulatory role. It is through the permit process that general guidelines are transformed into individual abatement requirements. Cancellation of permits for noncompliance is one method of enforcing the Act. Without a permit and the concomitant right to discharge pollutants, many industrial operations cannot be carried out.

EPA has identified nearly 65,000 dischargers subject to the NPDES. Through September 1976, 52,723 permits had been issued.²¹ Issuing permits on a case-by-case basis often entails much negotiation. There must be an opportunity for a public hearing before a permit is issued. However, individual permits are not subject to the National Environmental Policy Act (NEPA) and the submission of an environmental impact statement is not required.²²

A permit will require that a discharger meet whatever guidelines EPA has established for limiting effluents from industrial operations of that general type. As will be discussed in the next section, EPA has established industry-by-industry limitations that specify the maximum permissible discharges of various pollutants associated with the processes used in those industries. But permits do not simply recapitulate EPA effluent guidelines; a discharger maybe subject to additional requirements to meet water quality

standards or to prevent degradation of existing water quality.

Water Quality Standards and Nondegradation

The Water Quality Act of 1965,²³ required the States to adopt water quality standards for interstate waters, for the first time. Section 303 of FWPCA continued those standards; in addition, the States were required to develop standards for intrastate waters.²⁴ If a State should fail to establish adequate standards for either category, EPA is authorized to do so in its stead. Periodically, the States must review and revise their water quality standards. The following guidelines for State review and revision have been established by the EPA:²⁵

1. The States must review their water quality standards every 3 years and revise them where appropriate.
2. Water quality standards must protect the public health and welfare, and provide protection for downstream water quality standards.
3. The States must upgrade existing water quality standards where current water quality supports higher uses than those presently designated.
4. The States must upgrade existing water quality standards to achieve the Act's 1983 goal of fishable and swimmable waters where attainable. Attainability is to be determined on the basis of environmental, technological, social, economic, and institutional factors.
5. The States may downgrade existing water quality standards only on demonstrating that:
 - Existing standards are not attainable because of natural conditions (such as leaching from natural heavy-metal deposits);
 - Existing standards are not attainable because of irreversible man-induced conditions (as when known methods

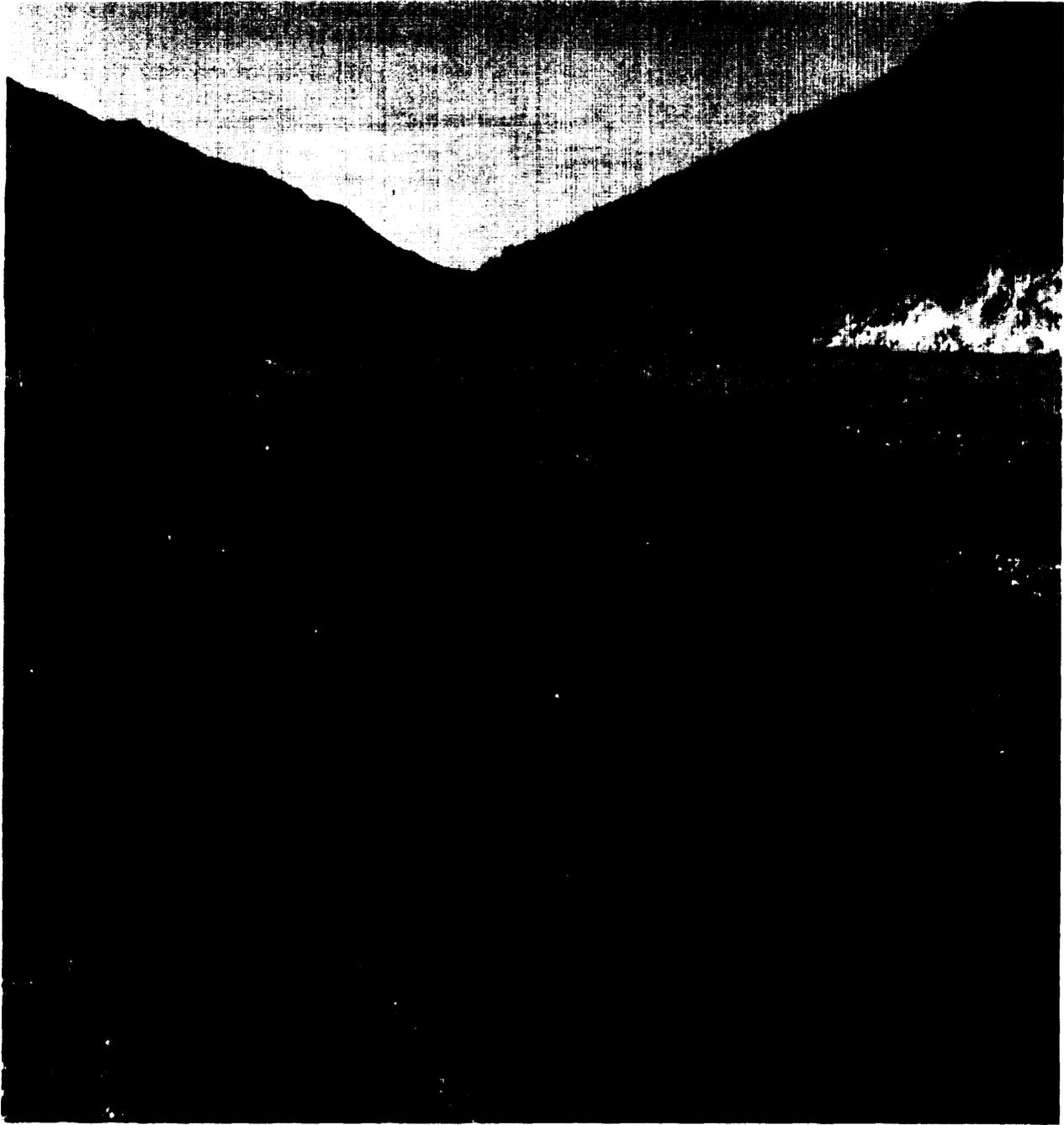
are incapable of restoring water to the designated use); or

- The application of existing standards would have substantial and widespread adverse economic and social effects (such as a marked increase in unemployment, not due to other factors, over an extensive area, for more than 1 year).

Before a State can issue a permit for discharging a pollutant under section 402 it must have a program for review and revision of water quality standards.²⁶ Once a water quality standard is established, a State must identify areas for which the 1977 effluent limitations are not sufficiently stringent to implement the applicable water quality standard.²⁷ For such areas, the State must determine the total maximum daily load of a pollutant that is consistent with the applicable water quality standard. This information is used to set more stringent permit requirements.

The water quality standards form the basis of a program designed to prevent the degradation of presently clean waterways. The antidegradation policy has several important elements. The regulations provide, without qualification, that "No further water quality degradation which would interfere with or become injurious to existing instream water uses is allowable."²⁸ Thus, if a particular body of water in its existing condition could be used for sport fishing, it cannot be degraded in any way that would reduce its suitability for this activity. Similarly, if a body of water is suitable for the propagation of fish, shellfish, or wildlife, for swimming, or for drinking water supply, then it must remain suitable for these and any other possible uses for which it is now fit. This does not mean that water quality may not deteriorate at all; small increases in pollutant loads may not be inconsistent with protecting a possible present use for a body of water.

With one exception, the regulations do not permit any increase in pollutant loads in those high-quality waters that currently ex-



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ceed the levels needed to support recreation and the propagation of fish, shellfish, and wildlife in and on the water. That exception permits a State to decide, after public participation, "to allow lower water quality as a

result of necessary and justifiable economic or social development."²⁹ It is qualified in two respects. The exception cannot be applied at all to "high-quality waters which constitute an outstanding national resource, such as



Photo Credit: OTA Staff

Alaska's rivers and streams are subject to rapid changes in depth, rate of flow, and sediment load due to natural conditions

waters of National and State parks and wildlife refuges, and waters of exceptional recreational or ecological significance,³⁰ and it cannot be applied in any way that allows water quality to fall below the levels needed to protect fish, wildlife, and recreation in and on the waters. These provisions of the anti-degradation policy protect waters not only from industrial expansions and sewage treatment plants, but also from commercial, agricultural, construction, and forestry sources.

The EPA regulations provided for implementation of the national nondegradation policy in three stages:

- By April 26, 1976, each State was required to have developed and submitted to EPA for approval a “State continuing planning process” containing a schedule for the development and adoption of a statewide policy on antidegradation.
- Between April and December 1976, each State was required, after public hearings, to adopt the new statewide policy on antidegradation. This policy had to be submitted to EPA for approval and to be at least as protective as the national policy.
- By July 1, 1977, the new statewide antidegradation policy had to go into effect. After that date, all proposed activities, which would increase water pollution, have to be screened for consistency with Federal-State antidegradation requirements.

State Permit Programs

A State may assume NPDES responsibilities—28 have already done so³¹—if, in addition to having developed a continuing planning process (pursuant to section 303 (e)), it has the authority to do the following:³²

1. Issue permits, for a period not exceeding 5 years, to ensure compliance with effluent limitations, water quality standards, standards of performance, toxic and pretreatment standards, and ocean discharge criteria;

2. Undertake inspections and monitoring;
3. Ensure that notice of permits is given to the public, the Administrator, and other affected States;
4. Reduce permit violations by enforcing civil or criminal penalties; and
5. Ensure that adequate notice is given of all materials introduced into publicly owned treatment works.

Even when a State has assumed the administration of the NPDES, the EPA Administrator may object to the issuance of any particular permit and prevent it from going into effect.³³ He also has the authority to withdraw approval of a State permit program if the State’s administration of the program fails to meet the requirements of section 402.³⁴

Certification for Federal Licenses

Before the granting of a Federal license or permit to conduct an activity that involves the discharge of pollutants into navigable waters, the applicant must present the certification required by section 401.³⁵ The certificate is to be issued by the State in which the discharge originates, if that State administers the NPDES, if it does not, then the certification must be given by EPA. A certificate must show that the activity for which a Federal license or permit is sought will comply with all applicable effluent limitations, water quality standards, pretreatment and toxic effluent restrictions, and standards of performance.³⁶

EFFLUENT LIMITATIONS

The Clean Water Act, unlike its predecessors, focuses on the operations of the polluter and not just on the resultant water quality. Specific limits on effluents are prescribed and must be adhered to by individual polluters. These limitations are enforced by the NPDES permit program administered by either the EPA or a State. No discharge of any pollutant from a point source is allowed unless a permit has been granted.³⁷ Such per-

mits must contain schedules of compliance which guarantee that the applicable effluent limitations will be met.

The limitation of effluents is essential for implementing the Act and attaining water quality goals:³⁸

The term, 'effluent limitation,' means any restriction established by a State or by the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance,

In practice, effluent limitations are developed by EPA on an industry-by-industry basis. Prior to the 1977 amendments, they defined the pollution loads allowable under the 1977 standard of "best practicable technology" and the 1983 standard of "best available technology economically achievable." These guidelines will be revised to meet the 1984 standards discussed below, and new tests added for the different classes of regulated pollutants.

Point Sources

The Act establishes four major classes of pollutant sources, each of which is subject to different standards and deadlines, and is regulated by different Federal and State agencies. The four classes are: (1) industrial point sources, (2) municipal point sources, (3) nonpoint sources, and (4) dredge and fill materials. A point source is defined in the Act as follows:³⁹ "The term point source means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants could be discharged." Return flows from irrigated agriculture are specifically excluded from the definition of point source,

Point sources, which are usually associated with industry and sewage treatment plants, tend to be responsible for local pollu-

tion, particularly from toxic effluents. The major thrust of the Act is aimed at controlling point sources that discharge from discernible, confined, and discrete conveyances.

Nonpoint sources, which account for the bulk of conventional pollutants affecting water quality, include surface runoff from urban and agricultural sources, the entry of air pollutants into waterways through dry fall-out, and precipitation and soil runoff-including runoff from mining and construction activities.

Under the Act, point and nonpoint sources are subject to different treatment. Point sources are regulated by a permit program based on uniform technology-based standards that is designed to reduce sharply previous pollution. Nonpoint sources, on the other hand, are not regulated by such specific Federal standards. This is primarily because discharges from these sources are diffuse, difficult to monitor, and dependent on uncontrollable climatic events (as well as geographic and geologic conditions), and may differ greatly from place to place.

Industrial point sources include all point sources other than publicly owned treatment works. Under FWPCA, the effluent limitations required that industrial point sources apply the BPT as determined by EPA, before July 1, 1977, and the BAT by July 1, 1983.

The 1977 amendments made several important changes in this procedure. The July 1977 BPT deadline has been extended until April 1, 1979, for those operators of point sources who demonstrated a good faith effort to achieve compliance.⁴⁰ The BAT standards and deadline have both undergone a complete revision. Pollution from industrial point sources is now divided into three classes—toxic, conventional, and nonconventional. Each of these is treated differently.

The Act defines toxic pollutants as:⁴¹

The term 'toxic pollutant' means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, in-

halation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations, in such organisms or their offspring.

Sixty-five named toxic pollutants, which were originally the subjects of an out-of-court settlement against EPA, must meet the BAT standards by July 1, 1984.⁴² Additional toxic pollutants, which are not on this list, must meet BAT standards within 3 years after effluent limitations are established.⁴³

The “conventional pollutants” include but are not limited to “biological oxygen demanding, suspended solids, fecal coliform, and pH.”⁴⁴ They are subject to effluent limitations that require the application of the “best conventional control technology” by July 1, 1984. This new standard takes into account a number of factors that were not considered in developing the BAT standards. These are:⁴⁵

Factors relating to the assessment of best conventional pollutant control technology (including measures and practices) shall include consideration of the reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived, and the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources, and shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, nonwater quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.

The Conference Report on the Clean Water Act of 1977 indicates that this standard is intended to be less stringent than the BAT standard in some, if not most, cases:⁴⁶

The cost test for conventional pollutants is a new test. It is expected to result in a determination of reasonableness, which could be somewhat more than best practicable technology or could be somewhat less than best available technology for other than conventional pollutants. The result of the cost test could be a 1984 requirement which is no more than that which would result from best practicable technology but also could result in effluent reductions equal to that required in the application of the best available technology.

Nonconventional pollutants—those classified as neither toxic nor conventional—will be subject to the BAT standard requirements no later than July 1, 1987.⁴⁷ However, the 1977 amendments provide for a waiver or modification of such requirements for the nonconventional pollutants where the following conditions are met:⁴⁸

1. The State concurs in the waiver.
2. The requirements are, at a minimum, as stringent as the BPT standard or any special July 1977 limitations for meeting water quality standards.
3. No other point or nonpoint source will face additional cleanup requirements due to the waiver.
4. The waiver will not interfere with meeting the 1983 goal of protected public water supplies and fishable and swimmable waters.

The waiver provision appears to reflect the judgment that the nonconventional pollutants are less likely than other pollutants to pose a serious threat to water quality. The toxic pollutants present a more immediate danger to any humans, fish, or wildlife that come in contact with a body of water containing one or more of these substances. The conventional pollutants, which produce their effects over a longer time period, can cause eutrophication, odor, nonpotability, and a decreased ability to support plant and animal life. A third type of pollutant, heat or thermal pollution, which is regulated under the Water Quality Act of 1965 and section 303 of

FWPCA, can also have deleterious effects on plant, fish, and wildlife.

New Source and Pretreatment Standards

The Act imposes additional requirements on two important types of industrial point sources: newly constructed sources and sources that discharge into publicly owned treatment works. Section 306⁴⁹ of the Act requires the Administrator to establish standards of performance for newly constructed sources of pollution and specifies 27 categories of sources for which standards will be developed.⁵⁰ These include steam electric powerplants and factories for the manufacture of nonferrous metals, phosphate, and ferroalloys. EPA may add other categories where appropriate.

New source standards of performance apply the following requirements:⁵¹

Standard of performance means a standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

In practice, standards of performance have often been equivalent to the 1983 BAT limitations developed for existing industries.⁵² Any newly constructed source which complies with an applicable standard of performance is not subjected to more stringent standards during the first 10 years of its operation.⁵³

Pretreatment standards are designed to limit the introduction into publicly owned treatment works of those pollutants that cannot be treated by them.⁵⁴ Publicly owned treatment works—which are also regulated by the Act—must meet standards that require the removal of specified pollutants. The pretreatment standards ensure that pollutants such as toxic effluents, which cannot be processed, are not fed to them. The 1977 Act allows the pretreatment requirements to

be waived where the treatment works that further processes the discharge from an industrial point source is able to remove pollutants covered by the pretreatment standards.⁵⁵

MUNICIPAL POINT SOURCES

Municipal sewage systems and treatment plants are both affected by regulatory and construction grant programs established by the Act. Municipal waste waters include wastes from homes and commercial establishments tied into sewage systems, some industrial wastes that are also tied in, and the ground water and runoff from precipitation that enters combined sewage and drainage systems. Municipal sewage treatment plants are usually designed to remove suspended solids and normal organic wastes, and to reduce the basic oxygen demand (BOD). There are two traditional types of municipal sewage treatment—primary and secondary.⁵⁶

In primary sewage treatment, suspended solids are allowed to settle. About 60 percent of the suspended solids is normally removed in this process, which also removes about 30 percent of BOD. Secondary treatment is a microbiological digestion process. This process enhances the BOD reduction to 85 percent or more and the solids removal to 90 percent or more. Both primary and secondary treatment reduce the BOD in waste water before discharge by removing organic matter.

The 1972 Act required all municipal point sources to utilize secondary treatment by July 1977, and to use the “best practicable waste treatment technology over the life of the works” no later than July 1, 1983. To facilitate the large construction and modifications program required to meet these goals, Title II of FWPCA established an \$18 billion construction grant program for municipalities seeking to upgrade the quality of publicly owned treatment facilities.

Mining operations are not directly affected by sewage treatment regulations. But requirements for municipal waste treatment

could have an impact on the potential for mineral development. Mine development may often lead to the creation of new communities or the expansion of existing ones beyond the capacity of their sewage facilities. Taxes, zoning, and land use plans will reflect this.

To qualify for receipt of construction grants, every State or local governmental unit or authority that is responsible for waste disposal is required to develop areawide waste treatment plans and practices. Section 208⁵⁷ provides for the identification of areas with substantial water-quality control problems and for the creation of management and planning agencies in each of these identified areas. In other areas (generally rural areas), the State must act as a planning and management agent. The planning agencies, which are funded by Federal grants, are required to put into operation a "continuing areawide waste treatment management planning process." This process must include:⁵⁸

1. Management programs that are capable of meeting the sewage treatment needs of the area over a 20-year period;
2. A regulatory program to control the location, modification, and construction of facilities that discharge water pollutants; and
3. Programs—including land use requirements—to control such nonpoint sources of pollution as agriculture, mining, and construction.

Plans under section 208 must have been submitted to EPA by November 1, 1978. State agencies that undertake planning and any local agency designated after 1975 must submit section 208 plans within 3 years of first receiving a planning grant.

Section 208 planning has taken longer to implement than was originally foreseen in 1972 because of delays in the entire municipal waste control program. The delays were caused, in part, by the Presidential impoundment of construction grant funds, and in part by EPA's failure to obligate the funds when they were made available. In response to the

delays, the Clean Water Act provided extensions of the 1977 secondary treatment requirements for any municipal treatment plant where construction has not been completed or where Federal funds have been held up.⁵⁹ The extension may last until July 1, 1983, provided that the treatment works will comply with the 1983 best practicable waste treatment standard. In addition, industrial point sources, that had planned to meet 1977 standards by discharging into municipal treatment works are granted an extension for the same time period for which the treatment works receives its extension.

Nonpoint Sources

Quantities of pollutants reach rivers and streams without ever flowing through pipes, sewage plants, or outfall structures. Nonpoint sources of water pollution—including runoff from such diffuse sources as urban, agricultural, silvicultural, mining, and construction activities—have increased significantly over the past several years. As an indication of the extent of this problem, it has been estimated that:⁶⁰

1. Storm-generated discharges account for between 40 and 80 percent of the annual total of oxygen-demanding materials;
2. Practically the entire 97 percent of the Nation's areas in rural land is a potential nonpoint source of pollution; over 400 million acres are in cropland, which delivers 2 billion tons of sediment annually to streams and lakes;
3. Animal wastes of livestock alone are estimated at 2 billion tons, equivalent to 10 times that produced by humans; and
4. Total phosphorus emissions from nonpoint sources have been estimated at 800,000 tons per year.

Nonpoint sources are regulated at the State and local levels by means of section 208 waste treatment management plans. The Act states that a 208 plan must include:⁶¹

A process to (i) identify, if appropriate, mine-related sources of pollution including new, current, and abandoned surface and underground mine runoff, and (ii) set forth procedures and methods (including land use requirements) to control, to the extent feasible, such sources.

Another relevant provision of section 208 requires similar treatment of construction activity related sources of pollution.⁶²

It is uncertain, at present, what effect non-point source controls will have on mineral access. Many areas have not as yet submitted section 208 plans. The guidelines prepared by the EPA have focused mainly on urban problems.

The 1977 amendments include a provision⁶³ that allows EPA to develop regulations prescribing "best management practice" to control the nonpoint discharge of toxic and hazardous materials associated with industrial manufacturing or treatment processes. No regulations have yet been issued under this section. The Conference Report indicates that the intent of the provision "is to control runoff of toxic and hazardous materials from industrial sites resulting from poor housekeeping procedures."⁶⁴ Mining operations could be subject to regulations under this provision.

Dredge and Fill Operations

The Army Corps of Engineers was first given regulatory authority over the disposal of dredge and fill material into navigable waters by the Rivers and Harbors Act of 1899.⁶⁵ Section 404 of FWPCA continued that authority and provides that the Secretary of the Army, acting through the Chief of Engineers, may issue permits, after notice and opportunity for public hearings for the discharge of dredged and filled materials into the navigable waters at specified disposal sites.⁶⁶

Permits issued by the Corps of Engineers for dredge and fill materials require that operations under the permit comply both with any effluent limitations and with water quality standards.⁶⁷ Permits for actions that sig-

nificantly affect the environment are subject to NEPA; therefore, the Corps must prepare an environmental impact statement before issuing a permit.

When the Act was passed, the Corps interpreted its jurisdiction to mean those waters that had traditionally (since 1899) been classified as "navigable." For this reason, the Corps did not assume Federal regulatory jurisdiction over extensive amounts of wetlands throughout the country.

On March 27, 1975, as a result of a suit (Natural Resources Defense Council v. Callaway),⁶⁸ the Corps was ordered to expand its regulations beyond its traditional definition of navigability. Regulations published on July 25, 1975, established a three-phase implementation schedule for the Corps' expanded jurisdiction over the dredge and fill permit program.⁶⁹ Phase I, which went into effect in July 1975, required permits for discharges of dredge and fill into traditional navigable waters and their adjacent wetlands. Phase II, which took effect in September 1976, expanded the Corps' jurisdiction to include primary tributaries of traditionally navigable waterways, natural lakes greater than 5 acres in surface area and their adjacent wetlands. Finally, Phase III, which took effect in July 1977, included all waters up to the headwaters where the stream flow is less than 5 cubic feet per second.

The expansion of the definition of navigable waters raised the possibility that many hitherto unregulated activities, as well as activities with little potential effect on water quality, would require +104 permits. Particular concern was expressed for conventional farming, ranching, maintenance, and construction activities. The 1977 amendments significantly altered the scope of activities subject to permit requirement. The following activities were exempted:⁷⁰

1. Normal farming, silviculture, and ranching;
2. Maintenance of dikes, dams, levees, and transportation structures;

3. Construction of farm or stock ponds and maintenance of drainage ditches;
4. Temporary sedimentation basins on a construction site; and
5. Farm roads, forest roads, and temporary roads for moving mining equipment constructed in accordance with best management practices.

These exemptions apply only if the activity does not bring an area of navigable waters into a use to which it was not previously subject, or does not impair the flow or circulation of navigable waters, or does not reduce the reach of such waters.⁷¹

The 1977 amendments also allow the issuance of general permits for any category of activities that involve the discharge of dredge and fill materials.⁷² General permits can be granted for a category of activities which the Secretary of the Army determines are similar in nature, cause only minimal adverse environmental effects when carried out separately, and will have only minimal cumulative adverse effects on the environment. No general permit may last longer than 5 years.

The 1977 amendments also provide for the State to administer both individual and general dredge and fill permit programs in phases II and III waters after approval of the program by the Administrator.⁷³ The State's authority for the program's approval is essentially the same one it must have to administer a 402 permit program.

Dredge and fill operations often accompany roadbuilding or construction, particularly near the coast, in wetlands, and in areas with many streams and lakes. Although temporary roads for moving mining equipment do not require permits, other access routes do. Where such operations are part of a project that would have a significant impact on the environment, the Corps must prepare an impact statement before issuing a permit.

Effluent Limits on Mining Activities

By regulation, EPA has established effluent limitations for some mining activities. The

regulations are found in 40 CFR Part 436, "Mineral mining and processing point source category," and 40 CFR Part 440, "Ore mining and dressing point source category." These existing regulations are narrow in scope. As of June 1978, no standards of performance, pretreatment standards or effluent limitations reflecting the best available technology had been established for any mining activity. Those BPT standards that have been established cover only a small number of discharged pollutants. However, for a number of mining activities, EPA has established a no discharge limit.

The regulation with the broadest effect is undoubtedly 40 CFR Part 440, Subpart B, "Base and precious metals subcategory," which applies to:⁷⁴

- a. Nonplacer mines operated to obtain copper-bearing ores, lead-bearing ores, zinc-bearing ores, gold-bearing ores, or silver-bearing ores;
- b. Mills that employ the froth-flotation process for beneficiation of copper ores, lead ores, zinc ores, gold ores, or silver ores;
- c. Mines and mills that use dump, heap, in situ leach, or vat-leach processes for the extraction of copper;
- d. Mills that extract gold or silver by the cyanidation process;
- e. Mills that extract gold or silver by the amalgamation process; and
- f. Mines or mine and mill complexes beneficiating gold ores, silver ores, tin ores, or platinum ores by gravity separation, including placer or dredge mining.

BPT standards are established for total suspended solids and pH for all categories (except for cyanidation process mills and dump, heap, in situ leach, or vat-leach processes for which no discharge is allowed).⁷⁵ BPT limits are also placed on discharges of copper, zinc, lead, cadmium, and cyanide from regulated mines and mills.⁷⁶

Other subparts of 40 CFR Part 440 establish BPT effluent limitations for iron ore,⁷⁷ bauxite,⁷⁸ ferroalloys,⁷⁹ uranium, radium, vanadium,⁸⁰ mercury⁸¹ and titanium.⁸² Each establishes limits on the discharge of suspended solids (in almost every case no more than 30 milligrams per liter) and pH (an allowable range between 6.0 and 9.0), as well as limits on concentrations of various metals in water discharges. For iron ore, limits are set on iron.⁸³ For the bauxite subcategory, limits are set on discharges of iron, lead, and zinc.⁸⁴ For the ferroalloy subcategory, limits are set for cadmium, copper, zinc, lead, arsenic, and ammonia discharges.⁸⁵ In the uranium, radium, and vanadium subcategory, guidelines are established for cadmium, zinc, arsenic, radium-226, and uranium.⁸⁶ The mercury ore subcategory establishes limits for discharge of mercury and nickel.⁸⁷ While the titanium subcategory contains limits on discharges of iron, zinc, and nickel.⁸⁸ In five instances, the regulations permit no discharge from certain types of facilities: iron ore mills employing magnetic or physical methods to beneficiate ore;⁸⁹ mines and mills that use dump, heap, in situ leach, or vat-leach methods to extract copper;⁹⁰ mills that extract gold or silver by cyanidation;⁹¹ mills using acid or alkaline leach for extraction of uranium, radium, or vanadium;⁹² and mills beneficiating mercury by gravity separation or froth-flotation.⁹³

40 CFR Part 436, "Mineral mining and processing point source category" establishes effluent limitations for the class of materials generally known, as industrial minerals.⁹⁴ Most industrial minerals are processed at or near the mine site. Processing can include slurry transport of ores or intermediate product. Mine dewatering is often associated with mining and processing of building materials.

Effluent limitations in Part 436 focus on process-generated waste water, rather than on discharges from mining operations per se. The term process-generated waste water is defined as "any waste water resulting from the transport of ore or intermediate product, air emissions control, or processing exclusive of mining."⁹⁵ A zero discharge level for process-generated waste water pollutants is established for the following mineral categories: crushed stone, construction sand and gravel, gypsum, asphaltic minerals, asbestos and wollastonite, barite, fluorspar, borax, potash, sodium sulfate, frash sulfur, bentonite, magnesite, diatomite, jade, and novaculite.⁹⁶ Allowable pollutant discharge levels have been established for process waste water and mine dewatering operations for: crushed stone (dewatering only), construction sand and gravel (dewatering only), industrial sand, phosphate rock, and graphite.⁹⁷

FOOTNOTE REFERENCES FOR CLEAN WATER ACT

¹Act of March 3, 1899, section. 13, 30 Stat. 1152, 33 U.S.C. 407.

²Water Quality Act of 1965, Public Law 89-234, 79 Stat. 903.

³Public Law 92-500, 86 Stat. 816.

⁴EPA effluent limitations that affect mining point sources are found at 40 CFR 436, "Mineral mining and processing point source category," and 40 CFR Part 440. "Ore mining and dressing point source category." The latter chapter covers copper, lead, zinc, gold, silver, bauxite, uranium, radium, vanadium, mercury, and titanium. The former chapter presently covers barite, fluorspar, borax, potash, phosphate, sulfur,

bentonite, magnesite, diatomite, novaculite, tripoli, and graphite; guidelines are planned for trona, lithium, kyanite, aplite, kaolin, feldspar, talc, and garnet. For the most part, these chapters now contain only 1977 BPT standards for the regulated sources.

⁵Natural Resource Defense Council v. Train, 396 F. Supp. 1386 (D.D.C. 1975).

⁶Public Law 95-217, 91 Stat, 1566, 33 U.S.C. 1251 et seq.

⁷See 33 U.S.C. 1160(c), these standards are continued by section 303 of FWPCA, 33 U.S.C. 1313.

⁸Section 101(a), 33 U.S.C. 1251(a).

⁹Section 101(a)(1)-(6), 33 U.S.C. 1251(a)(1)-(6).

¹⁰*Environmental Quality—1976, the Seventh Annual Report of the Council on Environmental Quality*, 4 (1976) hereafter *Environment—1976*.

¹¹Section 502(14), 33 U.S.C. 1362(14).

¹²Section 301(b)(1), 33 U.S.C. 1011.

¹³Section 301(b)(2), 33 U.S.C. 1311(b)(2).

¹⁴Section 307(a), 33 U.S.C. 1317(a).

¹⁵Section 306, 33 U.S.C. 1316.

¹⁶Sections 301(b)(1) and 303(d), 33 U.S.C. 1311(b)(1) and 33 U.S.C. 1313(d).

¹⁷*Environmental Protection Affairs of the 94th Congress*, p. 97.

¹⁸*Environment—1976*, pp. 16-17, 256-261.

¹⁹*Report to the Congress by the National Commission on Water Quality*, Mar. 18, 1976, pp. 7-10.

²⁰Public Law 95-217, 91 Stat. 1566, Dec. 27, 1977.

Amends section 518 of FWPCA to provide that the Act may be cited as "The Federal Water Pollution Control Act" (commonly referred to as the Clean Water Act). Section 2, 91 Stat. 1566.

²¹*Environmental Quality—1977, Eighth Annual Report of the Council on Environmental Quality* (1977) (hereafter *Environment—1977*).

²²*Id.*

²³Public Law 89-234, 79 Stat. 903.

²⁴Section 303(a)(2), 33 U.S.C. 1313(a)(2).

²⁵40 CFR 130.17.

²⁶Section 303(e)(2), 33 U.S.C. 1313(e)(2).

²⁷Section 303(d)(1)(A), 33 U.S.C. 1313(d)(1)(A).

²⁸40 CFR 130.17(e)(1).

²⁹40 CFR 130.17(e)(2).

³⁰*Id.*

³¹*Environment—1977*, at 35. These include California, Oregon, Washington, Montana, Colorado, Wyoming, North Dakota, Nevada, and North Carolina.

³²Section 402(b), 33 U.S.C. 1342(b).

³³Section 402(d)(2), 33 U.S.C. 1342(d)(2).

³⁴Section 402(e)(3), 33 U.S.C. 1342(e)(3).

³⁵Section 401(a), 33 U.S.C. 1341(a).

³⁶*Id.*

³⁷Section 301(a), 33 U.S.C. 1311(a).

³⁸Section 502(11), 33 U.S.C. 1362(11).

³⁹Section 502(14), 33 U.S.C. 1362(14).

⁴⁰Section 309(a)(5), 33 U.S.C. 1319(a)(5), as amended by Public Law 95-217, section 56(C), 91 Stat. 1592.

⁴¹Section 502(13), 33 U.S.C. 1362(13).

⁴²Section 301(b)(2)(C), 33 U.S.C. 1011; added by Public Law 95-217, section 42(a), 91 Stat. 1582.

⁴³Section 301(b)(2)(D), 33 U.S.C. 1011; added by Public Law 95-217, section 42(a), 91 Stat. 1583.

⁴⁴Section 304(a)(4), 33 U.S.C. 1314(a)(4), as amended by Public Law 95-217, section 48(a), 91 Stat. 1587.

⁴⁵Section 304(b)(4), 33 U.S.C. 1314(b)(4), as amended by Public Law 95-217, section 48(b), 91 Stat. 1587.

⁴⁶House Report 95-830, p. 85.

⁴⁷Section 301(b)(2)(F), 33 U.S.C. 1311(b)(2)(F).

⁴⁸Section 301(g), 33 U.S.C. 1311(g), added by Public Law 95-217, section 43, 91 Stat. 1583.

⁴⁹Section 306, 33 U.S.C. 1316.

⁵⁰Section 306(b), 33 U.S.C. 1316(b).

⁵¹Section 306(a)(1), 33 U.S.C. 1316(a)(1).

⁵²*Environment—1976*, at 14.

⁵³Section 306(d), 33 U.S.C. 1316(d).

⁵⁴Section 307(b), 33 U.S.C. 1307(b).

⁵⁵Public Law 95-217, section 54(a), 91 Stat. 1591, amending section 307(b)(1); 33 U.S.C. 1307(b)(1).

⁵⁶*Environment—1976*, at 257.

⁵⁷Section 208, 33 U.S.C. 1288.

⁵⁸Section 208(b)(2), 33 U.S.C. 1288(b)(2).

⁵⁹Section 301(i)(1), 33 U.S.C. 1311(i)(1), as amended by Public Law 95-217, section 45, 91 Stat. 1584, *Environmental Protection Affairs of the 94th Congress*, p. 91.

⁶⁰Section 208(b)(2)(G), 33 U.S.C. 1288(b)(2)(G).

⁶¹Section 208(b)(2)(H), 33 U.S.C. 1288(b)(2)(H).

⁶²Section 304(d), 33 U.S.C. 1314(d), as added by Public Law 95-217, section 50, 91 Stat. 1588.

⁶³House Report 95-830, p. 80.

⁶⁴33 U.S.C. 407.

⁶⁵Section 404(a), 33 U.S.C. 1344(a).

⁶⁶Permits issued under section 404 contain the following general conditions (ENG Form 1721):

b. That all activities authorized herein shall, if they involve a discharge or deposit into navigable waters or ocean waters, be at all times consistent with applicable water quality standards, effluent limitations, and standards of performance, prohibitions, and pretreatment standards established pursuant to section 301, 302, 306 and 307 of the Federal Water Pollution Control Act of 1972 (Public Law 92-500; 86 Stat. 816), or pursuant to applicable State and local law,

c. That when the activity authorized herein involves a discharge or deposit of dredged or fill material into navigable waters, the authorized activity shall, if applicable water quality standards are revised or modified during the term of this permit, be modified, if necessary, to conform with such revised or modified water quality standards within 6 months of the effective date of any revision or modification of water quality standards, or as directed by an implementation plan contained in such revised or modified standards, or within such longer period of time as the District Engineer, in consultation with the Regional Administrator of the Environmental Protection Agency, may determine to be reasonable under the circumstances,

d. That the permittee agrees to make every reasonable effort to prosecute the work authorized herein in a manner so as to minimize any adverse impact of the work on fish, wildlife, and natural environmental values.

⁶⁸392 F. Supp. 685 (D.D.C. 1975).

⁶⁹40 F.R. 31320, July 25, 1975; 33 CFR 209.120.

⁷⁰Section 404(f)(1), 33 U.S.C. 1344(f)(1), as amended by Public Law 95-217, section 67(b), 91 Stat. 1600.

⁷¹Section 404(f)(2), 33 U.S.C. 1344(f)(2), as amended by Public Law 95-217, section 67(b), 91 Stat. 1601.

⁷²Section 404(e), 33 U.S.C. 1344(e).

⁷³Section 404(g), 33 U.S.C. 1344(g).

⁷⁴40 CFR 440.20.

⁷⁵40 CFR 440.22(a).

⁷⁶40 CFR 440.22(a).

⁷⁷40 CFR 440, subpart A.

⁷⁸40 CFR 440, subpart C.

⁷⁹40 CFR 440, subpart D.

⁸⁰40 CFR 440, subpart E.

⁸¹40 CFR 440, subpart F.
¹³²⁴⁰ CFR 440, subpart G.

⁸³40 CFR 440.12(a).

⁸⁴40 CFR 440.32 (a)(1).

⁸⁵40 CFR 440.42(a).

⁸⁸40 CFR 440.52(a).

⁸⁷40 CFR 440.62(a).

⁸⁶40 CFR 440.72(a).

⁸⁹40 CFR 440.12(a)(3).

⁹⁰40 CFR 440.22 (a)(3).

⁹¹40 CFR 440.22(a)(4).

⁹²40 CFR 440.52 (a)(2).

⁹³40 CFR 440.62 (a)(2).

⁹⁴Industrial minerals include sulfur, asbestos, fluorspar, gemstones, graphite, building materials, abra-

sives, and absorbents. For a description of industrial minerals and their role, see Charles F. Park. *Earthbound*, pp. 117-130 (1975).

⁹⁵40 CFR 436.21(e).

⁹⁶40 CFR 436.22(a), crushed stone; 40 CFR 436.32(a) construction sand and gravel; 40 CFR 436.52(a), gypsum; 40 CFR 436.62(a), asphaltic mineral; 40 CFR 436.72(a), asbestos and wollastonite; 40 CFR 436.102(b), barite (except wet process or flotation); 40 CFR 436.112(b), fluorspar (except heavy media separation or flotation); 40 CFR 436.132(a), borax; 40 CFR 436.142(a), potash; 40 CFR 436.152(a), sodium sulfate; 40 CFR 436.192(a), frash sulfur; 40 CFR 436.222(b), bentonite; 40 CFR 436.232(a), magnesite; 40 CFR 436.242(a), diatomite; 40 CFR 436.252(a), jade; and 40 CFR 436.242(a) novaculite.

⁹⁷40 CFR 436.22(a)(2), crushed stone (dewatering); 40 CFR 436.32 (a)(2) construction sand and gravel (dewatering); 40 CFR 436.42(a)(2), industrial sand (HF flotation only); 40 CFR 436.42(a)(3), industrial sand (dewatering); 40 CFR 436.182(a)(1), phosphate rock; and 40 CFR 436.382(a), graphite.

COASTAL ZONE MANAGEMENT ACT

The Coastal Zone Management Act (CZMA)¹ provides a series of incentives for States to develop comprehensive land use planning and zoning programs to preserve and protect the resources of the coastal zone. The Act was passed in recognition of severe problems existing in the coastal areas and the absence of effective State and local initiatives to combat these problems.

State action under the coastal zone program has two phases: First, the development of a State management plan that meets criteria set forth in the Act and is approved by the Secretary of Commerce; second, the implementation of that plan. The aim of the law, in simplified terms, is to create State authorities with the power to manage and control all future development in the coastal region following a comprehensive management plan. The Secretary of Commerce, through the National Oceanic and Atmospheric Administration (NOAA), acts as the Federal administrator for the CZMA program and is charged with assuring that State plans and implementation programs meet the objectives of the Act.

State participation in the CZMA program is optional, but all 30 States eligible under the Act have thus far chosen to participate.² There are three strong incentives to do so: States receive Federal financial assistance to develop coastal zone management plans satisfying the statutory criteria; the cost of administering approved plans will also be substantially covered by Federal grants; and a State is assured that most Federal actions directly affecting coastal areas must be 'consistent' with the approved coastal zone management plan.

The potential impact of State coastal zone management plans on mineral access is clear. A State management plan (discussed in greater detail below) must include the following: a definition of permissible land and water uses within the coastal zone; guidelines on the priority of uses in specific areas (includ-

Note: Footnotes for this section appear on pp. 206-209.

ing specific listing of low-priority uses); and an inventory and designation of areas to receive specially stringent environmental protection. Decisions in any of these areas could have a controlling impact on the feasibility of mineral extraction or access within the coastal zone.

Questions of mineral access are also affected by a section of the Act requiring State plans to provide for "adequate consideration of the national interest involved in planning for, or in the siting of facilities . . . which are necessary to meet requirements other than local in nature."³ NOAA lists minerals as one of the resources in which there may be a national interest.⁴ Transportation networks are listed among facilities in which there may be a national interest. The requirement of "adequate consideration" has been interpreted by NOAA to mean that there be a balancing of national interests in coastal resources and facilities with Federal, State, and local concerns involving adverse economic, social, or environmental impacts.⁵ In any event, the State plan will have to address the question of restrictions on mineral extraction and access within the coastal zone.

THE COASTAL ZONE

The Act provides an inexact definition of the crucial term "coastal zone," the locus for management activity. Section 304(1) states:

The term 'coastal zone' means the coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of the several coastal States, and includes islands, transitional and intertidal areas, salt marshes, wet lands, and beaches. . . . The zone extends inland from the shorelines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters. Excluded from the

coastal zone are lands the use of which is by law solely subject to the direction of or which is held in trust by the Federal Government, its officers, and agents.

Section 304(2) indicates that the term 'coastal waters' includes 'those waters, adjacent to shorelines, which contain a measurable quantity and percentage of seawater, including but not limited to sounds, bays, lagoons, bayous, ponds, and estuaries.'

The inland extent of the coastal zone is decided on a case by case basis.' It must include areas whose uses will have "direct and significant impact on coastal waters." NOAA regulations list a number of significant factors such as the demographic, economic, political development, and geophysical characteristics of an area that should be considered in making decisions on the extent of coastal zone boundaries.⁷

Alaska has the longest coastline of any State, an estimated 47,300 miles of tidal ocean shoreline.⁸ Much of the coastline is in, and will continue in, Federal ownership and is therefore excluded from inclusion in the coastal zone.⁹ In its coastal zone plan submission of 1978, the State will initially define the Alaskan coastal zone as being seaward to the extent of State jurisdiction and landward in terms of biophysical criteria developed by the Alaska Department of Fish and Game.¹⁰ The initial landward boundaries will be subject to modification as the plan is developed in detail.¹¹

STATUTORY REQUIREMENTS FOR THE PLAN

The first phase of the CZMA process requires that the State develop a plan for managing activities in the coastal zone. At a minimum, the plan must contain the following nine elements specified in section 305(b):¹²

1. An identification of the boundaries of the coastal zone subject to the management program;
2. A definition of what shall constitute permissible land uses and water uses within the coastal zone that have a direct and significant impact on the coastal waters;
3. An inventory and designation of areas of particular concern within the coastal zone;
4. An identification of the means by which the State proposes to exert control over the land and water uses that have a direct and significant impact on the coastal waters, including a listing of relevant constitutional provisions, laws, regulations, and judicial decisions;
5. Broad guidelines on the priority of uses in particular areas, including specifically those uses of lowest priority;
6. A description of the organizational structure proposed to implement the management program, including the responsibilities and interrelationships of local, areawide, State, regional, and interstate agencies in the management process;
7. A definition of the term "beach" and a planning process for the protection of and access to public beaches and other public coastal areas of environmental, recreational, historic, esthetic, ecological, or cultural value;
8. A planning process for energy facilities that are likely to be located in or that may significantly affect the coastal zone, including, but not limited to, a process for anticipating and managing the impacts from such facilities; and
9. A planning process for (a) assessing the effects of shoreline erosion (however caused), and (b) studying and evaluating ways to control or lessen the impact of such erosion, and to restore areas adversely affected by such erosion.

These requirements are designed to ensure that qualifying plans achieve wise use of the land and water resources of the coastal zone by giving full consideration to ecological,

cultural, historic, and esthetic values as well as to the needs for economic development including the extraction of needed mineral resources. These requirements differ markedly from State plans under the clean air or water programs,¹³ in which the State plans must meet specific Federal requirements for the elimination of named pollutants in a specified time frame.

DEVELOPING THE PLAN

The first Federal incentive for State participation in the CZMA program is the provision of matching grants to meet State costs in developing an acceptable plan. Grants of up to 80 percent of the State costs may be made in each of 4 years.¹⁴

The CZMA offers considerable latitude to States in developing an approvable plan, but the program planning process requires that the States address the designated statutory criteria while doing so. As a result, State choices in the development of a proposed plan could affect the availability of or access to minerals on non-Federal land in coastal zones.

Key decisions in the development and implementation of a coastal zone management program include the designation of the coastal boundaries, the determination of permitted uses and their priority, the inventory and designation of areas of particular concern, and the establishment of land and water use controls. Designation of the coastal zone boundaries is the first step in the development of a management program. It determines the location and extent of territory subject to planning and controls and, equally important, those areas that are excluded from controls.

The Act recognizes that land and water uses in areas a considerable distance inland from the land-sea interface may have significant effects on the coastal environment. Therefore, the protection of this environment requires control of all areas whose uses will have "direct and significant impact on the coastal waters." The regulation interpreting

this requirement recognizes "that no simple geographic definition will satisfy the management needs of all coastal States" because of the peculiarities and variations that exist. Instead, it enumerates a number of factors, such as an area's demographic, economic, political, developmental, and geophysical characteristics, that should be considered in determining the coastal zone boundary for a State.¹⁵

After designation of coastal zone limits, the State must determine what are permissible land and water uses within the coastal zone that have a direct and significant impact on the coastal waters.¹⁶ In making these determinations, the regulations require States to consider, among other things, the "requirements for . . . extraction of mineral resources and fossil fuels . . ." and the development of indices measuring the environmental and economic impact of such activities,¹⁷ i.e., whether they are beneficial, benign, tolerable, or adverse. A State must provide for some evaluative mechanism in its plan in order to assess environmental and economic impacts resulting from the extraction of minerals and fossil fuels.

Section 305(b) specifically requires States to identify the means by which control over permissible land and water uses will be exerted; and the regulations delineate a variety of options in terms of laws, regulatory processes, and the like, that are available to demonstrate this capacity. This requirement is reinforced by the provisions of section 306(e) that require adoption of some regulatory process to approve or disapprove of various land and water uses. State coastal zone management plans must also include "an inventory and designation of areas of particular concern within the coastal zone." These are areas of special statewide concern, which, it is expected, will be emphasized in their development of coastal zone policies and controls.

According to regulations issued by NOAA to supply guidance to States in the development of their plans:¹⁸

Geographic areas of particular concern are likely to encompass not only the more often cited areas of significant natural value or importance, but also: (a) transitional or intensely developed areas where reclamation, restoration, public access, and other actions are especially needed; and (b) those areas especially suited for intensive use or development.

The regulations recognize that States "will vary in their perception of what areas are of particular concern" and provide detailed criteria for guidance during the designation process, which could affect mineral activities in coastal areas.

In designating areas of particular concern, the States are directed to make immediacy of

need a major consideration in their determinations and to base designations on a review of natural and manmade resources and the uses of the coastal areas. These include the following:¹⁹

1. Areas of unique, scarce, fragile, or vulnerable natural habitat, physical feature, historical significance, cultural value, and scenic importance;
2. Areas of high natural productivity or essential habitat for living resources, including fish, wildlife, and the various trophic levels in the food web critical to their well-being;
3. Areas of substantial recreational value and/or opportunity;



PhotoCredit " U.S. Dept.of the Interior, National Park Service

Stellar Sea Lions, Kenai fjord, Alaska

4. Area where developments and facilities are dependent on the utilization of, or access to, coastal waters;
5. Areas of unique geologic or topographic significance to industrial or commercial development;
6. Areas of urban concentration where shoreline utilization and other water uses are highly competitive;
7. Areas of significant hazard if developed, owing to storms, slides, floods, erosion, settlement, etc.; and
8. Areas needed to protect, maintain, or replenish coastal lands or resources, including coastal flood plains, aquifer recharge areas, and dunes, coral and other reefs, beaches, offshore sand deposits, and mangrove stands.

The inventory and designation of areas of particular concern should assist the States in meeting the statutory requirement that management plans provide procedures for the designation of specific areas for preservation or restoration for their conservation, recreational, ecological, or aesthetic values. It should be noted that the list includes consideration of the mineral value of coastal "areas of unique geologic or topographic significance to industrial or commercial development."²⁰

APPROVING THE PLAN

Once a State plan is approved by the Secretary, the State is eligible for a program administration grant under section 305 of the Act. These grants provide up to 80 percent of the cost of actually administering the programs described in the plan.²¹ The Secretary is also authorized to make grants to States for program costs during the period between submission of the plan and its approval.²²

Review and approval of plans is handled by the Office of Coastal Zone Management of NOAA.²³ Approval requires more than showing that a State plan contains the nine elements set forth in section 305(b). The Sec-

retary must also find that the following nine requirements have been met in the plan's development.

1. The plan was developed in compliance with relevant Federal rules and regulations, and allowed opportunity for full participation by "relevant Federal and State agencies, local governments, regional organizations, port authorities, and other interested parties, public and private."²⁴
2. The State has coordinated its program with local, areawide, and interstate plans applicable to areas within the coastal zone developed under section 204 of the Demonstration Cities and Metropolitan Development Act of 1966²⁵ and established an effective mechanism for the State coastal zone management program to maintain coordination with local governments and regional and interstate agencies. The coordination mechanism must require that the coastal zone management agency notify and receive comments from local governments on any program action that would conflict with local zoning rules. The State agency must allow 30 days for comment by the local officials; the management agency must review any such comments, prior to implementing the proposed action.²⁶
3. The State has held public hearings in developing the program.²⁷
4. The Governor has approved the plan.²⁸
5. The Governor has designated a single agency to receive and administer section 305 grants.²⁹
6. The State is organized to administer the plan.³⁰
7. The State has the authority to implement the program, including authority to control land and water uses in the zone and the ability to acquire interests in property.³¹ Controls over land and water may be accomplished through any one or a combination of these techniques:³²

- (a) Local implementation of State established standards and criteria subject to State administrative review;
- (b) Direct State land and water use planning and regulation;
- (c) Local planning and regulation of land and water uses subject to State administrative review for consistency, with State power to approve or disapprove after public notice and an opportunity for hearings.

The plan must also include a method for assuring that local land and water use regulations “do not unreasonably restrict land or water uses of regional benefit.”³³

8. The management program must provide for planning and siting of facilities (including energy-related facilities) necessary to meet requirements that are “other than local in nature.”³⁴
9. The program must include a procedure to designate areas for preservation or restoration for conservation, recreational, ecological, and other values.³⁵

However, compliance with the statutory requirements is not sufficient to guarantee plan approval. Regulations setting out general requirements supplementary to the statute state: “At the minimum, States shall include three broad classes of policies in their management program in order to provide a framework for the exercise of various management techniques governing coastal resources, uses, and areas.”³⁶ These policies are: (1) resource policies directed towards the management and conservation of valuable or vulnerable coastal resources; (2) coastal development policies that address such matters as shorefront access, ports and harbors, energy development, and mineral access; and (3) governmental process policies including clarification and simplification of regulatory and permitting procedures.

The State management plan may be amended with approval of the Secretary of Commerce after public notice, consultation with affected Federal, State, and local gov-

ernment agencies, and an opportunity for participation by interested parties. A State may, with approval of the Secretary, implement its programs in segments in order to focus immediate attention on those coastal areas with the most serious problems, as long as the segmented management program can ultimately be consolidated into a single State program.

During the review of each State management program submitted for Federal approval, NOAA will prepare an EIS pursuant to NEPA.³⁷

FEDERAL-STATE RELATIONSHIPS UNDER CZMA

The Act establishes a close relationship between the State and Federal coastal agencies conducting or licensing activities within or near the coastal zone. The coastal zone itself cannot contain “lands the use of which is by law subject solely to the discretion of, or which is held in trust by, the Federal Government”³⁸—e.g., national parks, forests, wildlife refuges, petroleum reserves, and land administered by BLM. The management plan, however, can have a major effect on Federal activities that might affect the coastal zone. In addition, Federal agencies acting in and around the zone have a role in the approval of a State management plan.

Section 306(b) requires the Secretary of Commerce to consider the views of Federal agencies that might be affected by a management plan before approving that plan. Thus, Federal agencies operating in or near the zone have the opportunity to call for changes in a management plan.

Once a plan is approved, the State then has the opportunity to influence Federal activity in and near the zone due to the “Federal consistency” provision of the Act. The consistency provision is, in actuality, fourfold:

- Federal agencies that conduct or support activities directly affecting the zone

must do so in a manner consistent, to the maximum extent, with the management program.³⁹

- Federal agencies undertaking a development project in the zone must ensure that the project is, to the maximum extent, consistent with the management program.⁴⁰
- Applicants for a Federal license or permit affecting land or water uses in the zone must secure State certification that the activity complies with the management program before the Federal agency can grant the license or permit.⁴¹
- Applicants for Federal assistance under other Federal programs affecting the coastal zone must include the views of the appropriate State management agency on the relationship of the proposed projects to the State coastal zone plan.⁴²

Exceptions to the consistency provisions may be made where the Secretary finds that the proposed Federal action is “consistent with the objectives of (the Act) or is otherwise necessary in the interests of national security.”⁴³

Section 307(f)⁴⁴ of the CZMA states that it does not in any way affect any requirement that is established by FWPCA, as amended,⁴⁵ or by the Clean Air Act, as amended,⁴⁶ or any requirement that is established pursuant to either of these Acts by Federal, State, or local governments. Moreover, the Act goes on to mandate that such requirements must be incorporated in the plan and must serve as the water pollution control and air pollution control requirements applicable to the coastal zone management program.

If there is a “serious disagreement” between any Federal agency and a coastal State in the development of a management plan under section 305, or in the administration of the plan under section 306, the Secretary of Commerce, in cooperation with

the Executive Office of the President, shall seek to mediate the differences involved.⁴⁷ Where the disagreement arises over a State-Federal conflict in the administration of the plan, a public hearing must be held in the local area concerned.⁴⁸

Federal land management agencies are subject to the consistency requirements of the CZMA.⁴⁹ Applications for rights-of-way or other uses of Federal lands in or affecting coastal zone areas must be consistent with any approved State management program, unless there is a decision by the Secretary of Commerce that the application is consistent with the Act or necessary in the national interest.⁵⁰ Applicants for permits or rights-of-way involving Federal lands in coastal areas in a State with an approved plan must secure State approval of their applications in addition to Federal agency approval.⁵¹ Under the Federal Land Policy and Management Act⁵² and the Forest and Rangeland Renewable Resources Act,⁵³ as amended, the BLM and Forest Service, respectively, are required to develop management plans for individual management units of public lands and national forests. For those units in or near designated coastal areas, the Federal plan should, under CZMA provisions, be consistent with State management plans “to the maximum extent practicable.” Thus, permissible uses of Federal lands in coastal areas may, to a large degree,⁵⁴ be controlled by individual State plans.

In Alaska, where large portions of the coast will remain in Federal ownership, the development and implementation of the management program has two likely consequences. First, the affected Federal agencies will clearly have a major impact on decisions by the Secretary of Commerce and NOAA regarding the adequacy and provisions of the program. Second, the management program, when approved, will provide the State with an opportunity to influence Federal activity over a large area in and around the coast, which would otherwise be totally beyond State control.

NATIONAL INTEREST CONSIDERATIONS

While the main thrust of the CZMA program is aimed at protecting and preserving natural resources in the coastal zone, the Act contains recognition of the needs for resource development.

Section 306(c)(8)⁵⁵ requires that State plans must provide for adequate consideration of the national interest involved in planning for and siting of facilities that are necessary to meet requirements which are "other than local in nature." NOAA regulations elaborate on the meaning of this provision.⁵⁶ This requirement is not construed as compelling the States actually to include accommodations for certain types of facilities in their management programs.⁵⁷ It is intended, rather, to make sure that such national concerns are considered at an early stage of State planning and that such facilities are not arbitrarily excluded or unreasonably restricted in the management program.⁵⁸ "Requirements, which are other than local in nature" are considered to be those relating to facilities designed to serve more than one locality.

NOAA has issued guidelines in the form of regulations that identify types of facilities with siting characteristics that the Secretary of Commerce believes may involve a clear national interest.⁵⁹ These national interest requirements include interstate transportation facilities, such as interstate highways, airports, aids to navigation, ports, harbors, and railroads. Under the terms of this regulation, State plans must make reference to the views of "cognizant Federal agencies" as to how these national needs may be met in the coastal zone of that particular State. In the case of minerals, the cognizant Federal agencies are the Bureau of Mines and the Geological Survey of the Department of the Interior. For transportation facilities, Federal agencies include the Federal Highway Administration, the Federal Aviation Administration, the Coast Guard, the Army Corps of Engineers, the Maritime Administration, and the Interstate Commerce Commission.⁶⁰

States must consult with appropriate Federal agencies and neighboring States in ascertaining local, regional, and national needs for facility sitings in or affecting the coastal zone.⁶¹ This coordination must begin at an early stage of planning, so that national and regional needs will receive full consideration during the process of program development. The regulations emphasize that the States should actively seek the advice of concerned Federal agencies, as well as consulting with neighboring States that share coastal resources, and with regional interstate bodies.

OVERVIEW: MINERAL ACCESS AND COASTAL ZONE MANAGEMENT

There are three important elements of State implementation of the coastal zone management program that should be of active concern to mineral interests. First, is the development of a State management program plan; second, is the opportunity for public participation in the development of the plan; and third, is the consideration of national interest involved in the siting of facilities. These elements are key components in the development and operation of a coastal zone management program and establish the State guidelines and rules for regulation of activities and uses within the coastal zone. Moreover, Federal agencies, including land management agencies, are required to conduct their programs and actions in the coastal zone to comply with the State plan, to the maximum extent possible. The Coastal Zone Management Act and regulations provide for a consideration of mineral resources needs and activities, and require opportunities for public participation through which the views of the minerals industry may be heard.

The initial development of a State plan establishes the limits of the coastal zone, designates permissible activities and uses and their relative priorities, identifies areas of particular concern, and establishes a State mechanism for control of land and water uses in coastal areas. Regulations for setting per-

missible uses specifically include in the list of factors States should consider in the planning process, a consideration of the requirements for the extraction of mineral resources and fossil fuels, and the environmental and economic impacts of these activities.⁶² Consideration of the transportation needs of the coastal zone, including transportation necessary for mineral resources extraction, should also be reflected in the planning process. The inventory and designation of areas of particular concern specifically include consideration of “areas of geologic or topographic significance to industrial or commercial development.”⁶³

A primary purpose of the Act is “to encourage the participation of the public, of Federal, State, and local governments, and of regional agencies in the development of coastal zone management programs.”⁶⁴ To this end, the Act requires that there be “public notice and opportunity for full participation by Federal, State, and local governments, regional and interstate agencies, and other interested parties, public and private” in the development of the State plan and proposals for modification.⁶⁵ All public hearings held

under the Act must be announced at least 30 days prior to the hearing date and all agency materials and documents must be made available to the public for review and study.⁶⁶ In addition, Federal regulations issued under the CZMA are subject to provisions of the Administrative Procedure Act and allow opportunity for public review and comment.⁶⁷

The ample public participation provisions in the Act should, in theory, facilitate the ability of representatives of the mining industry, as well as individual miners and operators, to bring their particular needs and problems before Federal, State, and local decisionmakers. At all phases in the development, review, implementation, and modification of State coastal zone management programs these concerns—including special access and transportation needs associated with operations in or affecting the coastal zone—can be expressed. However, experience thus far suggests that neither coastal zone planners nor the mining community have addressed themselves at any length to the potential impacts of coastal zone planning on mineral access.⁶⁸ It is still relatively early in the development of the program.⁶⁹

FOOTNOTE REFERENCES FOR COASTAL ZONE MANAGEMENT ACT

¹Public Law 92-583, 86 Stat. 1280, Oct. 27, 1972, as amended by Public Law 94-370, 90 Stat. 1013, July 26, 1976, 16 U.S.C. 1451-1464.

²Council on Environmental Quality, *Environmental Quality-1977, The Eighth Annual Report of the Council on Environmental Quality, 1977*, at 109. CEQ reports that management programs have been approved thus far for the States of Washington and Oregon and for the Bay Area Conservation and Development Commission of the San Francisco Bay area and Culebra area of Puerto Rico. Proposals have also been submitted by California and the Virgin Islands. Indiana was suspended for failing to make progress in planning a program and has applied for reinstatement.

³Section 306(c)(8); 16 U.S.C. 1455(c)(8).

⁴15 CFR 923.52. This section contains two tables, which are characterized as illustrative of various items of national interest. Table I, “Facilities in which there may be a national interest in planning or siting” lists (1) National defense and aerospace, (2) Energy production and transmission, (3) Recreation, (4) Transportation, and (5) Regional water treatment plants. Table II, dealing with resources whose preservation might justifiably conflict with the national interest involved in the siting of facilities in table 1, lists minerals, but lists as the “Major related Federal legislation” only the Mineral Leasing Act. While this does not mean that hardrock minerals are not to be considered items of national interest, it may indicate that NOAA has not focused on this particular area.

¹⁵15 CFR 923.52(a).

¹⁶A discussion of boundaries for the coastal zone is found at 15 CFR 923, subpart D.

The coastal management area must include the following: (1) areas in which there are "uses subject to management" (defined at 15 CFR 923.11; in general, they include facilities which have a direct and significant impact on coastal waters, such as tank farms and refineries, industrial parks, LNG facilities, ports, etc., 15 CFR 923.11(c)(2) specifically mentions mineral and sand extraction.); (2) Special management areas (defined at 15 CFR 923.21 as areas of unique scarce or vulnerable natural habitat or historical significance or cultural value, areas of high natural productivity or essential habitat for living resources, and other areas needing stringent environmental protection); (3) transitional or intertidal areas; (4) salt marshes and wetlands; (5) islands; and (6) beaches. See 15 CFR 923.31(a).

The succeeding section of the regulation identifies other areas that should be considered for, but are not required for, inclusion in the coastal management area: (1) watersheds; (2) waters under saline influence; and (3) Indian lands not held in trust by the Federal Government.

¹⁷Federal-State Land Use Planning Commission for Alaska, "The D-2 Book," Lands of National Interest in Alaska, May 1977, at 42.

"The coastal management zone cannot include "lands owned, leased, held in trust or whose use is otherwise by law solely subject to the discretion of the Federal Government." 15 CFR 923.33(a).

"Information concerning the current status of the Alaska coastal zone plan was provided in a communication from Mr. Roger Allington, a member of the Assessment Advisory Panel, who is serving on the State of Alaska Coastal Zone Planning Board.

¹⁸Section 305(b); 16 U.S.C. 1454(b). Interim final regulations for the development and approval of State coastal management programs were not issued until Mar. 1, 1978, after preparation of this analysis; they superseded previously proposed and final rules governing NOAA's administration of the Act (see 43 F.R. 8378, Mar. 1, 1978, for a list of revised and superseded regulations). Although some sections of this analysis were based on previous regulations, citations are to the revised regulations of Mar. 1, 1978.

¹⁹16 U.S.C. 1454(b).

²⁰Section 110 of the Clean Air Act. See 42 U.S.C. 7410 and section 208 of the Clean Water Act, 33 U.S.C. 1288.

²¹Section 305(c); 16 U.S.C. 1454(c).

²²15 CFR 923, subpart D, *supra*, notes 6 and 7.

²³15 CFR 923, subpart B.

²⁴15 CFR 920.12.

²⁵38 F.R. 33046, Nov. 29, 1973.

²⁶15 CFR 923.21(d).

2015 CFR 923.21(d)(1)(v).

²⁷Section 306(a); 16 U.S.C. 1455(a).

²⁸Section 305(a)(2); 16 U.S.C. 1454(a)(2).

²⁹See 43 F.R. 8378, Mar. 1, 1978.

³⁰Section 306(c)(1); 16 U.S.C. 1455(c)(1).

³¹42 U.S.C. 3334.

³²Section 306(c)(2); 16 U.S.C. 1455(c)(2).

³³Section 306(c)(3); 16 U.S.C. 1455(c)(3).

³⁴Section 306(c)(4); 16 U.S.C. 1455(c)(4).

³⁵Section 306(c)(5); 16 U.S.C. 1455(c)(5).

³⁶Section 306(c)(6); 16 U.S.C. 1455(c)(6).

³⁷Section 306(c)(7); 16 U.S.C. 1455(c)(7).

³⁸Section 306(e)(1); 16 U.S.C. 1455(e)(1). These three control techniques are discussed at some length in the Mar. 1, 1978 regulations, 15 CFR 923.42, at 43 F.R. 8407.

³⁹Section 306(e)(2); 16 U.S.C. 1455(e)(2).

⁴⁰Section 306(c)(8); 16 U.S.C. 1455(c)(8).

⁴¹Section 306(c)(9); 16 U.S.C. 1455(c)(9).

⁴²15 CFR 923.3(f). Mineral extraction is specifically mentioned among resource development policies.

⁴³15 CFR 923.62. NOAA requires that State management programs be accompanied by "an environmental impact assessment that meets the requirements of the National Environmental Policy Act." The Office of Coastal Zone Management uses this information to determine if it must prepare an environmental impact statement. (It is almost impossible to conceive of a situation in which an EIS would not be needed.) Procedures for timing and review of the EIS are set forth at 15 CFR 923.72.

⁴⁴Section 304(1); 16 U.S.C. 1453(1). See 15 CFR 923.33(a).

⁴⁵Section 307(c)(1); 16 U.S.C. 1456(c)(1).

⁴⁶Section 307(c)(2); 16 U.S.C. 1456(c)(2).

⁴⁷Section 307(c)(3); 16 U.S.C. 1456(c)(3).

⁴⁸Section 307(d); 16 U.S.C. 1456(d).

⁴⁹Section 307(c)(3)(A), section 307(c)(3)(B)(ii) and section 307(d); 16 U.S.C. 1456(c)(3)(A), 16 U.S.C. 1456(c)(3)(B)(ii), and 16 U.S.C. 1456(d). See 15 CFR 930, Subpart H, "Secretarial Review Related to the Objectives and Purposes of the Act and National Security Interest."

⁵⁰16 U.S.C. 1456(f). See 15 CFR 923.44.

⁵¹42 U.S.C. 7401 et seq.

⁵²33 U.S.C. 1251 et seq.

⁵³Section 307(h); 16 U.S.C. 1456(h). See 15 CFR 930, Subpart G, Secretarial Mediation.

⁵⁴Section 307(h)(2); 16 U.S.C. 1456(h)(2). See 15 CFR 930, Subpart G, Secretarial Mediation.

⁵⁵NOAA has recently published a final rule on Federal consistency with approved management programs, 43 F.R. 10510, Mar. 13, 1978. Consistency requirements for Federal lease or permit programs are at 15 CFR 923, subpart D.

⁵⁶15 CFR 923, subpart H.

⁵⁷See 15 CFR 930.63, State agency concurrence with applications for Federal permits or licenses; 15 CFR 930.64, Effects of State agency objection. NOAA regulations provide a process by which a State may list in advance certain Federal permit and license activities which must be reviewed for consistency, 15 CFR 930.53, and an associated procedure by which a State may have an opportunity to review other Federal permit and licensing activities should they prove to have an

impact on the coastal zone, 15 CFR 930.54. Both procedures allow for review of Federal permits and licenses relating to activities which actually take place outside the boundaries of the zone, but have an impact within the zone (see Comment, 15 CFR 930.53(b)). Whenever a State reviews an action, the applicant for the Federal permit or license must provide the State reviewing agency with data and information necessary to assess the impact of the proposed activity on the affected coastal zone. The State agency must provide for public notice of the application, 15 CFR 930.61, and, at its discretion, public hearings on the conformity of the activity with the management plan. Under the regulations, the applicant is initially required to certify that its application is in accord with the management plan, 15 CFR 930.57. The State acts as a reviewer, either concurring in the applicant's assessment, 15 CFR 930.63, or objecting, 15 CFR 930.64. If the State agency objects, then the Federal agency may not issue the permit or license, 15 CFR 930.65, unless the Secretary overrides the State decision under 15 CFR 930, subpart H.

⁵²Public Law 94-579, 90 Stat. 2743, Oct. 21, 1976, 43 U.S.C. 1701 et seq. Planning requirements are at section 202, 43 U.S.C. 1712. It states, in part, that: "In the development and revision of land use plans, the Secretary (of the Interior) shall . . . (9) to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies and of the States and local governments within which the lands are located, . . . Land use plans of the Secretary under this section shall be consistent with State and local plans to the maximum extent he finds consistent with Federal law and the purposes of this Act." Section 202(c)(9), 43 U.S.C. 1712(c)(9).

⁵³Public Law 93-378, 88 Stat. 476, Aug. 17, 1974, as amended by Public Law 94-588, 90 Stat. 2949, Oct. 22, 1976. 16 U.S.C. 1601, et seq. Section 6 contains requirements for national forest system planning, 16 U.S.C. 1604, but contains no specific mention of consistency with State or local management plans.

⁵⁴There is no provision for direct State approval or disapproval of agency land use plans that control development within the coastal zone. The consistency requirement technically affects only direct Federal agency activities and activities requiring a Federal license or permit, not plans or procedures that maybe determinative of agency choices of which activities will be undertaken and which licenses and permits will be granted. Of course, if agency plans and procedures are not sensitive to coastal zone management programs, then they will merely create an internal procedure that makes choices that can be nullified when they reach fruition as direct action, licenses, or permits. Significantly, the consistency regulations do contain a provision describing a process by which management plans and the consistency requirement will be applied directly to OCS plans, 15 CFR 930, subpart E. The impact of

OCS activity on the coastal zone and the question of control over that activity remains controversial and has been a central force in the development of the entire coastal zone program. It is likely that in framing the consistency regulations, as elsewhere in developing the regulatory structure for administration of the Act, other types of land use and other Federal land use planning efforts were not considered in great detail.

⁵⁵16 U.S.C. 1456(c)(8).

⁵⁶15 CFR 923.52.

⁵⁷15 CFR 923.52(a).

⁵⁸Id.

⁵⁹See table I, 15 CFR 923.52.

⁶⁰Id.

⁶¹15 CFR 923.52(f). In addition to the national interest provision, the Act and regulations contain a related provision concerning "uses of regional benefit," 15 CFR 923.12 and 15 CFR 923.43, designed to ensure that a State plan does not prevent the development of projects that are of regional benefit.

⁶²See 15 CFR 923.2(d)(8), 15 CFR 923.3(f)(2).

⁶³15 CFR 923.21(d)(1)(v).

⁶⁴Section 303(d), 16 U.S.C. 1452(d).

⁶⁵Section 306(c)(1); 16 U.S.C. 1455(c)(1).

⁶⁶Section 308; 16 U.S.C. 1457.

⁶⁷Section 314; 16 U.S.C. 1463.

⁶⁸As part of this assessment, OTA commissioned two studies of the relationship between developing coastal zone management programs and questions of mineral access. One study, "Effects of the Federal Coastal Zone Management Act of 1972 on Access to Minerals on Non-Federal Lands," Earth Satellite Corporation, 1977, was a review of programs and interviews with public and private representatives in the States of Delaware, Maryland, and New Jersey. The other study, "Coastal Zone Management and Access to Onshore Minerals on Non-Federal Lands—A Threshold Assessment," Theberge and Whitney, 1977, analyzed laws and interviewed mining interests (from major hardrock mining operators to small sand and gravel producers) and coastal zone regulatory personnel in the States of Virginia, North Carolina, and South Carolina.

Both studies came to similar conclusions. Earth Satellite reported:

Direct (resulting from implementation of the Act) or indirect (resulting from State and local laws and regulations developed as a result of the general attitude towards land management and environmental protection fostered by CZMA and related Federal laws) environmental, social/cultural, economic, national security, recreation/scenic, transportation, institutional, or other effects on onshore non-Federal mining resulting from the CZMA have not been identified.

All but a few of the mineral producers in the three State area are small businesses; most are unaware of the CZMA and none could cite specific access or blockage problems resulting from the Act.

Theberge and Whitney found:

Even in States that have enacted or are adopting comparatively advanced coastal management and planning programs, such programs have not as yet expressly addressed the issue of access to minerals in the coastal zone, although both North Carolina and South Carolina have regulatory process and authority to do so. Although the CZM planning phase will soon enter its fourth and final year, mining interests still have an opportunity to play a meaningful role in plan development.

This lack of focus on mineral access is understandable. Plans are still in the development stage. Other controversies such as OCS development and public access to beaches have dominated the coastal zone planning process. Issues such as Surface Mining legislation, the Clean Air Act, and Alaska National Interest Lands have had higher priority for the mining community.

However, the findings of the two reports—while clearly an accurate reflection of the situation in the places and times studied—may not portray the relation of coastal zone management to minerals access at later times or in other States. The States studied shared the following characteristics: (1) None were far advanced in management planning; (2) The major mining activity was the extraction of common variety minerals; (3) All the States involved had highly developed coastlines with a history of land use control by pervasive and comprehensive zoning laws; and (4) None of the States had a particularly major Federal presence on or near the coastal zone. It is conceivable that coastal zone management will have a more appreciable impact on mineral access, in any State, when a final plan is ap-

proved and operational, and that it might have a more significant effect in States with hardrock mining potential in the coastal zone, in States which do not have a history of land use controls on coastal areas, or in States which have a significant Federal land management presence on the coastal zone.

⁶⁹Alaska has yet to submit a coastal zone management plan. Some steps have been taken at the State and local level to begin the process. State legislation passed in 1977, S. 220, establishes a framework for State control over local decisions as allowed by section 306(e)(1)(A) of the Act, 16 U.S.C. 1455(e)(1)(A). A Coastal Zone Policy Council will develop guidelines to be implemented at the local and regional level. Every local government unit bordering on, or located in an area that has a significant impact on the coast will have authority to implement these guidelines. In unorganized areas, special new boards and commissions have been established to control use of the coast or land and water having an impact on the coast. The effects of the consistency provision will have a major bearing on the operation of the management program in Alaska for two reasons: (1) major exploration, development, and production programs planned as part of the OCS program and (2) the large amount of coastal lands that will remain under Federal ownership even after State and Native land selections are completed. The roles of Alaska Natives and the Native Corporations, which have large coastal holdings, have yet to be clarified. Although Indian tribes can operate as regional planning agencies, 15 CFR 923.92(e), the Corporations are not tribes. However, villages will implement the State Guidelines. Material supplied by Roger Allington, see *supra*, note 10.