Here again the observed rates are all calculated by the procedure used for cyclopropane and cyclobutane with various values of the number of effective degrees of freedom, s, in the reservoir. The best agreement between the calculated values of k in Fig. 2 and the observed values in Table 2 is obtained for a reservoir with about 20 degrees of freedom. For Fig. 3 the experimental data of Robertson (*10*) were used to calculate k. The same general conclusions are reached if the experimental data of Cook and Abegg (*11*) are used.

The theory that the observed slow rate of burning in a detonation results from sequential burning of successive surface layers of a solid or liquid and the theory developed here that slow reaction arises from disequilibrium between translational and vibrational degrees of freedom of the reacting molecule both invoke the same rate-determining step—that is, slow heat transport from translational to vibrational degrees of freedom. Slow diffusion of reactants to the site of reaction is another kind of starvation kinetics frequently encountered. We can only deal appropriately with such delayed reaction rates as we recognize and sort out the exact cause. Clearly a change in the temperature dependence of reaction provides symptomatic although not conclusive evidence of the nature of the change in mechanism. Experiments designed to establish the exact cause of changes in mechanism are needed and will be particularly valuable.

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A Disaster in the Environmental Movement

The National Environmental Policy Act has wasted environmentalists' resources on processing papers.

Sally K. Fairfax

Critics of the National Environmental Policy Act of 1969 (NEPA) are relatively rare, and they fall into two categories: those whom it affects adversely and those who think it is interpreted too narrowly. The complaints of those whom NEPA affects adversely are frequently dismissed as self-interested or as motivated by a desire to continue their activities without consideration of environmental costs (*1–3*). Those who think NEPA's mandate is being given too cramped an interpretation praise NEPA generally but have reservations which are reflected in calls for vigorous application or for more expansive interpretation of all parts of NEPA (or both). While they believe that NEPA brought a new day in responsible agency decision-making, they see that it has not solved all of our environmental problems (*4–13*). In this article I seek to establish a third type of criticism: that, far from being a salubrious process in need of further elaboration and refinement, NEPA has been a disaster for the environmental movement and for the quest for environmental quality.

My argument is made by countering a considerable body of opinion praising what is called the "NEPA process" (*4–17*). The general opinion is that NEPA has improved agency decision-making processes by altering internal agency deliberations and by opening them to public scrutiny and participation. I suggest that NEPA does not constitute a new approach to administrative reform and is actually a poor vehicle for a reformation of agency decision-making. Litigation under NEPA and preoccupation with the NEPA process truncated preexisting and potentially significant developments in the definition of agency responsibility for environmental protection and in citizen involvement in agency deliberative processes. It turned environmentalists' efforts away from questioning and redefining agencies' powers and responsibilities and focused them instead on analyzing documents. This preoccupation has led to a misallocation of the environmental movement's resources.

The initial response of environmentalists to the passage of NEPA is now described as euphoric (*4*). In fact, the initial response was limited and skeptical. Very little appeared in the popular press at all. What did appear in the environmentalist publications can only be described as reserved (*5, 14, 15*). The initial reaction displayed in the legal and professional journals emphasized the limitations of another round of procedural review. Much of the discussion focused on the Council on Environmental Quality (CEQ) (*16, 17*). The "action forcing provisions" requiring impact statements received relatively little attention (*17, 18*). In general, the initial response of agencies to NEPA was minimal. Many agencies believed that the act did not affect them because their activities already reflected its policy goals (*19*). Thus, far from being greeted with a chorus of praise, NEPA aroused surprisingly little interest, and much of that was focused

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on CEQ rather than on the Environmental Impact Statement (EIS) requirements.

NEPA became the central focus of environmental activism and discussion mainly through judicial interpretation of NEPA in the *Calvert Cliffs* case (*20*). The public response to *Calvert Cliffs* in late 1971 defined NEPA's image (*6, 21, 22*). From that point, victory appeared to follow victory (*23*) in the courts, and all were well publicized (*7, 24*). NEPA's successes stimulated alarmist and defensive articles. For a brief period, NEPA appeared to be in danger of being amended or "emasculated," and much of what was written was designed to counter such action (*3, 8, 22, 25–27*). The overall theme of these discussions in support of NEPA is that NEPA has caused an improvement in agency decision-making processes.

These arguments (that NEPA improves agency decision-making) are based on two questionable assumptions about the causes of environmental degradation and the relative competence of different groups to solve environmental problems. The first assumption is that environmentally unsound decisions are caused by an administrative system which is failing because it is captured, incompetent, or ill-informed. The second assumption is that other groups or institutions, notably the public and the courts, are consistently better informed, more competent, less subject to capture, and can guide or force agencies into environmentally correct decisions (*28*). The focus of NEPA on decision-making reform rests on the belief that administrative insight, information, and sensitivity will prevent environmental degradation. The issue I discuss is whether NEPA is achieving or can achieve the victories in administrative reform claimed by its supporters.

Internal Reform

Supporters of NEPA argue that, internally, it has forced changes in agency decision-making processes in at least two ways: (i) agencies are forced to consider alternatives to their proposed programs and projects and (ii) they are obliged to do so while giving weight to environmental or amenity values that they previously ignored. This internal reform, NEPA supporters argue, has been accompanied or caused by (or both) external reform through citizen involvement. Supposedly, this involvement has occurred both at the planning stage and in the courts and is due to NEPA.

It is unlikely that any agency ever totally ignored alternatives and environmental values in its planning and decision-making. What is important in the NEPA process is that consideration of those factors is required—obligatory, public, and a basis for review of agency activities. My argument depends on two significant facts about such requirements: (i) they antedate NEPA by at least 5 years and (ii) the requirements developing prior to NEPA are better directed than is the EIS requirement at long-term reform. Support for my argument is found in environmental litigation before the passage of NEPA, where plaintiffs attacked administrative agencies' authority to take particular actions.

For example in *Scenic Hudson I* (*29*) plaintiffs challenged a Federal Power Commission (FPC) decision to grant a license to Consolidated Edison Company for the construction of a pumped storage hydroelectric facility on the Hudson River at Storm King Mountain. In a major victory for environmentalists the court set aside the license and remanded the case for further study.

The court found in the FPC's statutory responsibilities as planner and protector of the public interest the inherent mandate that the FPC consider a broad range of environmental and amenity values, as well as utility and cost. The decision required the FPC not merely to consider such values when they were presented, but affirmed its responsibility to actively develop the appropriate data on a full range of variables. In addition, the court noted that there was no evidence in the record showing that the FPC had considered alternatives to the proposed Storm King facility (*29*, p. 621).

Thus, the executive agency's judicially enforceable responsibility for considering alternatives, for weighing environmental values, and for proving that it had done these things antedated NEPA by at least 5 years.

The importance of this point lies in the difference between NEPA requirements and *Scenic Hudson* requirements. NEPA defines the responsibility of considering alternatives and environmental values solely in connection with a document which circulates appended to a proposal. The *Scenic Hudson* requirements are prerequisites to the agency's authority to act. *Scenic Hudson* requirements offer a much more powerful tool than NEPA for altering agency proposals and attitudes. If a NEPA statement is inadequate the court requires the agency to revise the document, whereas if the court finds that the agency is acting without authority the activity stops. The agency cannot proceed unless it adjusts the activity to comply with its authority or goes back to Congress to have its authority redefined (*30*). Thus, the *Scenic Hudson* approach is more likely to force agencies to rethink their goals and assumptions than is the EIS.

Decision-Making Model in NEPA

The requirements of NEPA make little sense as an instrument of internal agency change, partly because of inherent misconception of the nature of the decision-making process.

The "action forcing" provisions of NEPA require the preparation and circulation of detailed statements regarding any major federal action which would significantly affect the human environment. The responsible federal officer must prepare a draft document for circulation and comment. Citizens, public groups, and government agencies potentially affected by the proposed action respond to the draft. A final impact statement is then prepared which must include and respond to the comments received. This final document then accompanies the proposal through the "agency review process." The idea of an impact statement accompanying a proposal becomes humorous given the length of some of the documents.

More importantly, NEPA is based on three major misconceptions about the bureaucratic decision-making process.

1) NEPA presupposes that there is a decision-maker who considers the issue and then makes a decision prior to which documents can be circulated. But every relatively clear choice is based on compromises and negotiations in and between Congress, the agencies, private interest groups, and the general public. Any project or program is the product of dozens of decisions and decision-makers. To label any particular set as "the" ones, is disingenuous and misleading.

2) NEPA presumes that proposals can be identified, analyzed, countered by alternatives, and subjected to public scrutiny at or near their point of inception before the agency becomes committed to the undertaking. This assumption is most troubling on programmatic impact statements that analyze ongoing agency management programs. Programs go forward of necessity, and their direction is defined by statute as much as by the planning process. To identify parts of them as a proposal is artificial. Although projects such as highways or dams are easier to identify, they too are difficult to re-

view prior to the commitment of agency effort. Elaborators of NEPA overlook the simple fact that proposals exist because they have advocates, because people, inside and outside the agency, are behind them pushing for them. An agency is not necessarily committed to every proposal that surfaces, but it cannot be neutral about any that do.

3) NEPA presumes that there is a range of reasonable alternatives to any proposal that an agency can identify and rationally analyze. But an unbiased analysis of alternatives is difficult to achieve. Proposals are indicators of agency values and commitments as well as statements of agency skills and potentials. Agencies have little motivation or capability to analyze alternatives they cannot carry out. Court decisions requiring agencies to analyze alternatives beyond their competence or authority demonstrate difficulties inherent in the NEPA requirement rather than the recalcitrance of the agencies.

These assumptions are intimately related to each other and to the rational hierarchical model of the bureaucracy. In this model, decision-makers and their advisers are pictured sitting down, identifying a problem, clarifying goals regarding its solution, and then formulating a policy to resolve it. As Lindblom and others have made so clear, this is not a useful way to conceptualize decision-making (*31, 32*). Bureaucrats cannot and do not attempt a comprehensive survey of a problem, nor do they deal with situations de novo. Proposals are difficult to sift out of ongoing agency business. Bureaucrats tend to focus on "policies which differ only incrementally from existing policies" (*32*). Although the rational model has been usefully debated within social science circles, it has been decades since it was accepted as a description of reality.

To summarize, "The act can be interpreted as a call for environmentally coordinated rational decision making" (*9*). The point is that decision-making in federal agencies is not rational in the classic sense and that NEPA is misdirected because it rests on the assumption that agency decision-making is rational, or can be.

Misconceptions About Data in NEPA

NEPA rests on the assumption that there is virtue in simply amassing and circulating scientific data. Not only do few decision-makers have the time and the skill to digest large amounts of technical information, but also NEPA reflects a misunderstanding of the nature of scientific truth and of the utility of scientific evidence. The goal of environmental analysis is to gain information about the environmental consequences of proposed actions and their alternatives. Ideally the information should be precise enough to enable us to make informed trade-offs. Unfortunately, the information does not always exist (*5*), nor is the NEPA process conducive to generating it.

As one commentator noted (*33*)

> . . . ecology by its very definition involves such a broad and complex number of things and interactions that adequate knowledge for practical application is very difficult to obtain. The synthesis of observations and data into a complete and accurate description of a natural system to be impacted by technology, and the prediction of some future state of that system, is a science (perhaps art) practiced by a very few and not satisfactorily.

If the information generated were simply insufficient to meet NEPA's goals, little harm would result. However, NEPA has distorted the direction of scientific inquiry by putting tremendous amounts of money and effort into applied rather than pure research. Worse, NEPA favors a quick justification of previously defined positions. "The new role of ecologists in public affairs seems assured," commented one observer (*34*). But the "science" in impact statements is not disciplined and not cumulative (*35*). Proper scientific inquiry must proceed gradually, under the full scrutiny of a skeptical and disciplined profession. It cannot be rushed or obliged to take positions on current issues if it is to be credible or valid. It seems reasonable to suggest that one of the long-term effects of NEPA will be the distortions it has caused in the science it relies on.

The effect of this information on the decision-making process is probably not as bad as it may be for the scientific community, but neither is it a route to the reform of decision-making. Even perfect understanding of all of the ecological ramifications of a project would not indicate the appropriate course of action. A wide variety of economic, social, and political variables have at least as much to do with decisions as ecological constraints. Generating ecological information, either unreliable, incomplete, contradictory information as is presently the case, or perfect information under ideal circumstances in the unforeseeable future, will not change the calculus of decision-making. On the contrary: the decision-making process itself defines how technical information is perceived and utilized (*36*).

External Reform

Confronted with these obvious problems, many NEPA proponents emphasize the external aspects of the NEPA process: citizen participation in decision-making (*5, 10–12, 19, 23, 26*) and increased access to the courts (*3, 13, 15, 37*). These aspects of reform have been more widely discussed than internal reform even though NEPA's provisions regarding citizen access to decision-making are far less explicit than its EIS requirements. Supporters of NEPA argue that the law is critical to opening agency decision-making to public scrutiny and the courts to citizen suits. These external developments have occurred, but cannot be attributed to NEPA. There is, again, basis for asserting that NEPA procedures sidetracked more useful pre-existing developments.

There are three basic flaws in the argument that NEPA has made great contributions in the area of citizen participation:

1) The public involvement movement antedates NEPA. It was a major social movement in the 1960's (*38*) and was not given profile or particular attention in NEPA. It is inherent: agencies cannot endure without public support. Their ability to maintain themselves, grow, achieve, and increase their budgets and their responsibilities depends on mobilizing support from an attentive and vocal public (*39*). The citizen involvement movement of the 1960's broadened agencies' focuses. New groups representing new values attempted to achieve their goals through active participation in agency deliberations. Agencies were required to respond both of necessity and by statute. The environmental movement was part of these developments, but NEPA came too late to be considered causative or even definitive.

2) NEPA has few citizen participation requirements. In the context of the times, NEPA's public involvement provisions are skimpy. Section 101 (a), the declaration of policy blandly referring to cooperation, is the most specific reference:

> . . . it is the continuing policy of the Federal Government, in cooperation with State and local governments, and all other concerned public and private organizations to use all practicable means . . . to create and maintain conditions . . . under which man and nature can exist in productive harmony. . . .

The "action forcing" Section 102 is striking because it never mentions public review and comment on EIS's. Comments are only required from any federal agency which has jurisdiction by law or

special expertise with respect to any environmental impact involved. When the statement is completed, it shall be "made available" to the President, the Council on Environmental Quality and to the public . . ."

Public involvement requirements in NEPA stem from Executive Order 11514, the Guidelines of the Council on Environmental Quality, and agency regulations. The Executive Order directs heads of agencies to

> Develop procedures to ensure the fullest practicable provision of timely public information and understanding of Federal plans with environmental impact in order to obtain the views of interested parties. These procedures shall include, whenever appropriate, provision for public hearings, and shall provide the public with relevant information, including information on alternative courses of action. (Sec. 2 [2])

The CEQ guidelines and agency guidelines for EIS preparation are more specific. But even they require only that the public be provided with timely relevant information and be allowed to comment on it.

Public involvement requirements in other environmental legislation and agency public involvement programs vastly exceed the skimpy urgings of NEPA in this regard (*40*). NEPA is simply not a clear or comprehensive public involvement mandate, and the involvement which has accompanied NEPA process was read into its words by an already active public. Moreover, the most crucial aspect of public access to decision-making is people's ability to obtain information. Since 1946, the Administrative Procedures Act has contained a rather bland, unutilized statement of a general public right of access to agency documents and data. In 1974 this section was significantly amended. Since then the Freedom of Information Act has been critical in obtaining data from administrative agencies. Citizens can now sue to obtain material which is not forthcoming in a timely fashion. This act and not NEPA has been dispositive in creating an atmosphere conducive to citizen access to agency-held information (*41*).

3) While it cannot be conclusively demonstrated, the public involvement that NEPA has induced is so formal, so predictable, and so proposal-oriented that it seems to have stifled meaningful dialogue between citizens and agencies. The most disturbing aspect of public involvement under NEPA is that although it has been extensive, it appears to constitute a deterioration of the public participation concept as it was developing prior to 1969. Citizen participation in impact-statement preparation is characterized by three things. (i) Public involvement is arduous and repetitive. It requires citizens to analyze, review, comment, and participate on several separate occasions: typically, at the alternative formulation, planning, draft, and final stages. The dialogue becomes repetitive and only the very committed remain interested. (ii) The dullness of the dialogue is exacerbated by the focus on alternatives. The presence of alternatives colors the substance of the discussion. Almost inevitably the dialogue results in a misleading pseudoplebiscite, a count of the number of advocates of each alternative, rather than a discussion of goals. (iii) People expend considerable effort discussing a document, the inclusions, exclusions, and appropriateness of its emphases rather than alternative futures and programs (*42*).

NEPA may very well have a negative impact on public involvement. Certainly the public participation movement was well established long before NEPA. By tying citizen participation to a process of reviewing and filing documents, NEPA has sterilized and stultified the dialogue between agencies and the public that was beginning to develop in the late 1960's.

The second aspect of the assertion is that NEPA has contributed to external reform centers on expanded citizen access to the courts. It is frequently alleged that NEPA has broadened standing to sue and enlarged the scope of judicial review of agency actions. This whole line of reasoning concerning the courts is somewhat self-defeating since if NEPA is truly effective in achieving internal agency reform, judicial action should be unnecessary.

However, access to the courts has two aspects: (i) the right of a citizen to be heard in court, or a citizen's standing to sue; and (ii) the scope of review, or the nature of the issues that a court will review once a citizen has gained access. If NEPA has enhanced litigants' ability to gain standing or broadened the scope of review, it has expanded citizen access to the courts.

But NEPA has not expanded standing. The early difficulties of environmental litigants in gaining standing were attributable to "injury in fact" rules. It has long been recognized that "one who is in fact adversely affected by governmental action should have standing to challenge that action if it is judicially reviewable" (*43*, chap. 22). Standing was denied for a variety of reasons: the injury complained of had to be an invasion of a legally protected right, arising out of a statute or contract (Tennessee Electric Power Co. *v.* T.V.A., 306 U.S. 118); it had to be peculiarly suffered by the litigant, as opposed to being borne by the public generally (Perkins *v.* Lukens Steel Co., 310 U.S. 113); and so on. These judicially defined "tests" were difficult for environmental litigants to meet since the emphasis was on clear economic harms to specific individuals. Generally suffered affronts to the environment asserted by citizens who were not uniquely affected did not constitute injury in fact for the purposes of gaining standing.

Early environmental litigants did occasionally gain standing by carefully drafting their complaints to focus on a particular harm that they suffered. For example, in a 1953 case the courts accepted the Washington State Sportsmen's Council as an aggrieved party because they claimed that a proposed project would destroy fish "which they [among others] are interested in protecting." (State of Washington Department of Game *v.* F.P.C., 207 *Fed. Rep. 2nd Ser.* 391). Later the courts began to recognize noneconomic injury as real injury in fact for standing purposes, such as in *Scenic Hudson*. Nevertheless, until quite recently standing was a substantial problem to environmental litigants. Currently, standing is no longer an important barrier to environmental litigation, but NEPA had nothing to do with the change. According to Davis (*43*) the basic orientation of standing was changed in 1968. Four major cases, two in 1968 and two more in 1970, changed thinking on the matter so that "many now have standing who were denied it before 1968. It is no longer necessary to assert an injury to a legally protected interest. Rather the injury complained of must merely be arguably within the zone of interests dealt with in the statute at issue." (Association of Data Processing Services Organizations *v.* Camp, 397 U.S. 150).

In the environmental area, the litigation most frequently cited in connection with standing is the Mineral King Case. (Sierra Club *v.* Morton, 405 U.S. 727). In Mineral King, the Supreme Court denied the Sierra Club standing to sue to halt a ski development. But the court in effect wrote a set of instructions for future litigants claiming injury of a noneconomic nature to interests that are widely shared. The court did not question the idea that "changes in the aesthetics and ecology of the area" would constitute an "injury in fact"; it simply noted that the Sierra Club failed to allege that it or any of its members would be affected in any of their activities or past-times by the proposed development. Future litigants were thus advised that ecological or es-

thetic change constitutes injury in fact, as long as the litigant is injured. The key to gaining standing, then, is asserting that an individual has used or enjoyed the environment alleged to be changed and is harmed thereby (*44*). As these cases illustrate, the courts expanded standing independently of NEPA. While NEPA generated much litigation, it did not expand standing. Interestingly, several contemporary statutes contained citizen suit provisions reflecting clear congressional intent to expand standing through legislation (*45*). The omission of such a provision from NEPA simply illustrates that the act was not conceived as a way to expand or alter the concept of judicial standing.

Environmental litigation was also impeded by restrictions on the scope of review. Courts will not consider questions which Congress has committed by law to agency discretion. Proponents of NEPA argue that it expanded the range of judicially reviewable actions.

But the expanding scope of review of administrative actions by the courts can be traced at least to passage of the Administrative Procedure Act in 1946. This act has been particularly evident since the 1960's in all kinds of administrative law cases. The courts are less inclined to defer to agency discretion and more inclined to find issues of law within their jurisdiction upon which to decide cases. Environmental cases are indistinguishable in this trend. If anything, judicial deference to agency expertise persisted longer in the resource management field.

In the development of rules of reviewability, three standards were particularly important. First, courts look to the authorizing statute to determine the agency's authority to act. Second, if the court determines that the agency did act within its statutory authority, the court determines whether the challenged action was arbitrary, capricious, or an abuse of discretion. The focus is on whether the decision was based on full consideration of the relevant information. Finally, if both of these conditions are met, the court decides whether appropriate procedures were followed. The agency action or decision may be overruled or enjoined by the court for failure to meet any of these three standards. Failure to meet the first two is much harder to correct than failure to meet the third, at which NEPA is directed.

Application of the first standard is well illustrated in another major case before the passage of NEPA, Citizens to Preserve Overton Park *v.* Volpe (*46*). The Supreme Court held a decision by the Secretary of Transportation invalid because in deciding to build a road through a park he had exceeded his statutory authority. The Department of Transportation Act of 1966 and the Federal Aid to Highways Act of 1968 prohibit the secretary from authorizing the use of federal funds to construct highways through public parks if "feasible and prudent" alternative routes exist and unless "all possible planning to minimize harm" to the park has been undertaken. As in *Scenic Hudson I*, the Supreme Court could find no evidence to support the secretary's contention that in deciding to build in a park, he had met his statutory obligations.

NEPA does not focus on administrative agencies' authority to act. Everything implicit in the first two tests, the authority and "arbitrary and capricious" standards, is collapsed into the procedural standard. The agency meets NEPA requirements simply by filing an adequate document. All of the litigation surrounding NEPA has been focused on questions about the adequacy of procedures pertaining to the filing of documents. Far from broadening the scope of judicial review, it seems reasonable to assert that NEPA narrowed it. The staggering number of cases brought under NEPA does not alter the fact that the issue being litigated is not the nature of the proposed action or the agency's authority to act, but the presence or absence of the correct words on a piece of paper.

Conclusions

Supporters of NEPA herald it as major legislation which reformed administrative decision-making by requiring consideration of alternatives and environmental variables and by involving the public and the courts in decision-making. However, NEPA did not cause any of these reforms and to the extent that the reforms themselves are productive, NEPA actually detracted from their development.

The tragedy of NEPA is that it turned energy, attention, and effort away from a redefinition of agency authorities and spent it on proliferating paper. It truncated discussion of environmental protection in terms of authorizing statutes which define the existence and mission of executive agencies, and it directed attention to the preparation and filing of reports. Environmentalists tried to find substantive requirements in the process of writing and circulating impact statements, while turning their backs on agencies' authorizing legislations which clearly have substantive content.

Arguing that NEPA has been violated is a relatively simple task. One merely alleges that the impact statement is inadequate. Some inadequacies will always exist in EIS's because knowledge is imperfect. In contrast, it is more difficult to argue that an agency lacks authority to act. The latter task must be undertaken agency by agency, whereas NEPA applies to all agencies. NEPA is easy to grasp. Doing so, however, restricts one to talking about documents.

NEPA could have been ignored by environmentalists. Instead, they seized on its statement requirements and riveted judicial and public attention on documents. People were distracted and misled into thinking that a new day of environmentally sensitive decision-making had dawned. The legal victories did not, however, halt or even significantly alter many projects. Beneath the flurry of exciting "victories," few people saw or would admit that the fruits of the efforts merely consisted of evermore complex and intricate requirements for processing papers.

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27. *Sierra Club Bulletin* **57**, 17 (1972).
28. See L. Jaffee, *Buffalo Law Review* **20**, 231 (1970); R. Crampton, *Georgetown Law Journal* **60**, 527 (1972) for slightly different but supportive discussions of this theme.
29. Scenic Hudson Preservation Conference *v.* Federal Power Commission, 354 *Fed. Rep. 2nd Ser.* 608 (2nd Circuit 1965) certificate denied 384 U S. 941 (1966). Hereinafter referred to as *Scenic Hudson I*.
30. For the next but perhaps not the final rounds on *Scenic Hudson*, see Scenic Hudson Preservation Conference *v.* Federal Power Commission 453 *Fed. Rep. 2nd Ser.*, 463 (2nd Circuit 1971). See also R. DuBey and K. Zimmerman, *New England Law Review* **10**, 279 (1974).
31. C. Lindblom, *Public Administration Review* **19**, 79 (1959).
32. A. Etzioni, *ibid.* **27**, 385 (1967).
33. R. Carpenter, *Environmental Law Review* **6**, 50014 (1976), p. 50017.
34. R. Carpenter, *Science* **168**, 1316 (1970).
35. D. W. Schindler, *ibid.* **192**, 509 (1976).
36. H. M. Ingram, *Nat. Resour. J.* **13**, 150 (1973).
37. R. Gillette, *Science* **176**, 146 (1972); M. Egan, Jr., *Georgia Law Review* **9**, 417 (1975); F. Hanks and J. Hanks, *Rutgers Law Review* **24**, 230 (1970); *Science* **178**, 426 (1972); *Sierra Club Bulletin* **57**, 17 (1972).
38. D. Moynihan, *Maximum Feasible Misunderstanding* (Free Press, New York, 1970.)
39. F. E. Rourke, *Bureaucracy Politics and Public Policy*. (Little Brown, Boston, 1969), pp. 63–86.
40. L. C. Irland, Southern Forest Experiment Station, Mimeo. pp. 10–11; also A. B. Bishop, *Public Participation in Water Resources Planning* (WR Report 70-7, 1970); J. Hendee, R. Lucas, R. Tracy, Jr., T. Staed, R. Clark, G. Stankey, R. Yarnell, *Public Involvement and the Forest Service* (Forest Service, Washington, D.C., 1973.)
41. NEPA does reference 5 USC 552 in part of section 102 (c) which provides that copies of the statement and comments "shall be made available to the President, the Council on Environmental Quality and the public as provided by Section 552 of Section 5, United States Code." NEPA and its provisions alone were admittedly inadequate to provide access to agencies. But the reference to 5 USC 552 did not cure the basic inadequacies of NEPA. The teeth in The Freedom of Information Act, which put teeth into section 552, were passed in 1974 and therefore was not referenced in NEPA. To include the public and provide access by reference to 5 USC 552 in 1969 was to make motions without meaning.
42. S. Fairfax, *J. For.* **73**, 10 (1975).
43. K. C. Davis, *Administrative Law* (West Publishing, St. Paul, 1958).
44. Justices Douglas, Blackmun, and Brennan dissented (at 741, 755, and 755, respectively) in the 4 to 3 decision (Powell and Rhenquist took no part).
45. See R. Crampton and B. Boyer, *Ecology Law Review* **2**, 407 (1972), p. 427.
46. Citizens to Preserve Overton Park *v.* Volpe (401 U.S. 402, 1971).
47. Thanks go to G. L. Achterman, member, Oregon State Bar, for aid in developing and revising this paper.

NEWS AND COMMENT

Agency Drags Its Feet on Warning to Pregnant Women

As the result of some public prodding by Commissioner Donald Kennedy of the Food and Drug Administration (FDA), the Bureau of Alcohol, Tobacco, and Firearms (BATF) in the Treasury Department has begun proceedings to require a label on alcoholic beverages, warning women that drinking during pregnancy may cause birth defects. The move was spurred by recently mounting evidence of the existence of a "fetal alcohol syndrome"—a set of physical and mental abnormalities in children of mothers who drank during pregnancy.

According to evidence presented recently to a national symposium of physicians and scientists about the syndrome, and to a recent congressional hearing, the syndrome is characterized by growth deficiencies, mental retardation, diminished head size, defects in body organs, and possibly such brain dysfunctions as hyperactivity and learning difficulties. Moreover, it seems that these characteristics may be prompted by a mother's intake of as few as 3 ounces of alcohol a day or by a one-time drinking binge during pregnancy.

Despite the urgency and importance that has been attached to increasing awareness of the syndrome among health professionals and the public, there has been some concern that BATF, which has jurisdiction over the labeling of alcoholic beverages, has shown little inclination to impose the health warning requirements quickly. Two months after Kennedy publicly released a letter to Rex Davis, the BATF director, that asked him to "initiate immediately whatever procedures are necessary" to impose the labeling requirements, BATF published only a notice seeking additional public comment on the necessity for such a requirement. At a hearing on 31 January before the subcommittee on Alcoholism and Drug Abuse chaired by Senator William Hathaway (D–Maine), Davis noted that the decision on labeling was "serious and complex," and suggested that a broad-based national educational campaign may be more appropriate. He added that BATF probably would employ an outside, independent scientific consultant to evaluate evidence on the need for labeling and on the fetal alcohol syndrome presented to it by the FDA and National Institute on Alcohol Abuse and Alcoholism, which is spending a total of $3.5 million this year and next on fetal alcohol research.

Officials at the FDA are reluctant to antagonize BATF, but several pointed out, as did a congressional staff member, the difference between such an unhurried approach and the statement by Kennedy in his letter to Davis that, "Quite frankly, if the FDA retained jurisdiction over the labeling of alcoholic beverages, it would waste no time in commencing proceedings to require label warnings." According to several observers, the roots of the contrast between the two agencies may be found in the circumstances surrounding the loss of FDA jurisdiction over the labeling.

In his testimony before the Senate subcommittee and in an interview with *Science*, Kennedy explained that the jurisdiction was lost in a 1976 federal court suit, *Brown-Forman Distillers Corp.* v. *Matthews*, brought in the western district of Kentucky after the FDA tried to require makers of alcoholic beverages to list the ingredients of their products on the labels. The FDA wanted the ingredient labeling in order to facilitate potential recalls of products found to contain hazardous added ingredients—such as a clarifying agent that might be used in wine or a food coloring—and to assure that consumers who are allergic to one or more of the added ingredients would know what they are buying. "Yeast, fruit, malt, molasses, spices, preservatives, even egg whites and fish glue (which are used as clarifying agents)" are known allergens used in alcohol products, Kennedy said.

In the suit, the judge did not reject the FDA's contention that alcoholic beverages are a food and therefore subject to its authority, but he did say that Congress has implicitly exempted alcohol *labeling* authority from the Food, Drug, and Cosmetic Act, and that BATF had primary responsibility for the labeling. Because BATF earlier had turned down an FDA request to require ingredient labeling, FDA earnestly wanted to appeal the court decision. Their request to the Solicitor General to initiate the appeal was referred to the White House Office of Management and Budget (OMB), where it was rejected in a letter on 20 July from Dennis Green, the associate director for economics and government, however. "It was a political judgment,"

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