

NEPA AND THE FAA: BACKGROUND AND PROCEDURES

by

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Insofar as a matrix is a common technique of displaying environmental impacts, I have chosen to use this method in this section to present the people that have had the most significant impact on this paper and my academic environment. The "specific impact categories" are displayed along the horizontal axis while the sources of significant impact are on the vertical axis (apologies to Luna Leopold). My heartfelt thanks go to all in the matrix, as well as many folks not included, for your assistance in my stay at this esteemed institution of higher education.

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NEPA AND THE FAA: BACKGROUND AND PROCEDURES

ABSTRACT: Upon enactment of the National Environmental Policy Act in 1970, a new era in environmental concern within the federal government began. As the processes and procedures of compliance with the act became refined through experience and regulation, the intent of the legislation has increasingly become integrated into decision making within federal agencies. But because these procedures evolved, the specifics of complying with the act have changed over time. When the Council on Environmental Quality passed binding regulations concerning NEPA compliance in 1978, the rate of change slowed, but was not stopped. The changes in procedures can result in delays in project planning until the new process becomes incorporated. A guide for preparation of environmental documents can reduce delays caused by uncertainty concerning current requirements.

This paper traces the development of NEPA and the how it relates to one federal agency, the Federal Aviation Administration. With the stage set, discussion turns to the development of one NEPA-compliance document, the Environmental Assessment, for FAA-administered projects. The work related to developing Environmental Assessments by private consultants is the primary concern, and a guide based on FAA guidelines for this work was prepared.

INTRODUCTION

With the passage of the National Environmental Policy Act (NEPA) in 1969 (P.L. 91-190), a national policy was enacted with the express purpose to "encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and the biosphere and to stimulate the health and welfare of man." The short (five page) act has been described as "the most important piece of federal legislation designed to achieve environmental protection and preservation (Heer and Hagerty, 1977;41).

The act set the groundwork for the inclusion of environmental concerns in the decision-making process at the federal level. The vehicle used to achieve this end is the environmental impact statement (EIS). According to Section 102(2)(C) of the act, all federal agencies must prepare a "detailed statement of environmental impact" prior to implementation of every "major federal action significantly affecting the environment." NEPA gave little guidance for agencies in what the requirements for an EIS were, resulting in a measure of confusion within the federal government while the act was being interpreted (Koo,1984).

To many federal agencies, consideration of environmental concerns in the planning process was a new procedure, added to existing engineering and/or economic matters, and was initially treated separately (Andrews,1973). As procedures for compliance with the act became more structured, through litigation and regulation, these procedures have been instituted within agencies while the process has undergone continual tuning (Yost,1984).

This paper will trace the development of NEPA and the associated guidelines and regulations for compliance, and relate the current circumstances to one agency, the Federal Aviation Administration (FAA). Environmental professionals involved in planning projects administered by this agency are the primary focus. Because the NEPA process has undergone continual refinement since its inception, the environmental professional must keep abreast of changes to insure that the

process is followed correctly and that the resultant documents include all required information. This can be a burdensome task as NEPA compliance is only one part of the planning process. Time and personnel constraints are an ongoing challenge, especially for a small firm (Soliday, personal communication). The intended product of this research is a guide, or outline, to be used by airport planners during the process of environmental planning to assist in making the procedure efficient in terms of time; to reduce delays due to uncertainty of requirements while producing a document that is useful in decision-making. The focus of the study will be on preparation of environmental assessments (EAs).

THE DEVELOPMENT OF THE NEPA PROCESS

There has been an immense volume of material written concerning NEPA and its various aspects (Liroff, 1980; 154). Some background is needed to provide a context for the present situation, so the developments most relevant to this study will be examined.

Overview of the Act

The act is divided into two parts: title I which is a declaration of policy and the "action-forcing" mandates, and title II, which establishes the Council on Environmental Quality.

Title I. Section 101 of NEPA declares national environmental policy, stating Congress' recognition of man's impact on the natural environment and the Federal Government's responsibility to "improve and coordinate Federal plans, functions, programs, and resources" in order to protect, preserve, and enhance the human environment and natural resources.

In order to insure that the policy was implemented, Section 102, the "action-forcing" provision, was included. As previously noted, Section 102(2)(C) is the teeth of NEPA. It is here that the requirement for a "detailed statement by the responsible official" concerning "major Federal action significantly affecting the quality of the human environment" was presented. Also included were specific topics to be addressed in an EIS and the requirement for interagency cooperation and public review.

These are not the only provisions in Section 102, however. Also called for is a "systematic, interdisciplinary approach...to planning and decisionmaking," the mandate to "study, develop, and describe appropriate alternatives to recommended courses of action on any proposal which involves unresolved conflicts", to "initiate and utilize ecological information in planning," and other requirements.

These provisions are interdependent and were designed to have two principal functions in order to ensure the achievement of policy goals. The first function is to ensure the generation of information on which to base environmentally sensitive decisions; the second is to foster the incorporation of the information into agency decision-making (Koo,1984;54). It should be stressed that the EIS was not intended to be an end unto itself; rather it was seen as a vehicle by which national environmental policy could be implemented.

Title II. Title II of the act establishes the Council on Environmental Quality (CEQ) and its functions. The CEQ consists of a three-person committee in the Executive Office of the President, nominated by the president and confirmed by the Senate, and its staff. Under NEPA's mandate, the CEQ advises the President on matters pertaining to the environment, recommends legislation, and oversees the workings that are required by title I of the act (Black,1981;12). CEQ is also required by the act to "document and define changes in the natural environment" and "to report at least once a year to the

President on the state and condition of the environment." This led to reports published annually by the Council.

NEPA gave very little guidance on the procedures to be used in preparation of an EIS, and the CEQ was not given statutory authority to issue guidelines. This problem was swiftly rectified when President Nixon issued Executive Order 11514 in March 1970, only two months after the act took effect, giving CEQ such authority. It took the Council only until May of the same year to issue interim guidelines (Black,1981;15: Erikson,1977;25). The CEQ guidelines and their subsequent development is extremely important in the development of the NEPA process, so more detailed discussion is warranted.

CEQ Guidelines and Regulations

Executive Order 11514 placed the responsibility of devising procedures for preparing EISs on federal agencies as well as giving CEQ authority to issue guidelines. Therefore, the role of the CEQ guidelines was to augment and refine NEPA, rather than to institute binding procedures (Smardon, et al,1976). Agencies were to use CEQ's guidance in fashioning their requisite procedures.

CEQ Guidelines. The interim guidelines issued in 1970 were not much more specific than the act itself. The primary thrust of the interim guidelines was to define general procedural aspects of compliance; substantive aspects were not presented. Major elements of the guidelines included establishing the date by which agencies must enact their own guidelines (June 1, 1970),

and creating a new document, the draft statement. The draft EIS was to be optional and not subject to public review, but rather a means to incorporate interagency review early in the process (Andrews,1976).

CEQ issued revised guidelines in April 1971. In response to perceived problems with agency compliance in the year following the adoption of the interim guidelines, several major revisions were made. First, new emphasis was given to early integration of environmental considerations into the planning process, as opposed to the earlier directive to assess impacts "before undertaking" major actions. This was in response to the practice of several agencies which used the EIS process only to satisfy the requirement for a document, rather than using the information in planning. Second, the revised guidelines were more detailed in the range of issues that agency guidelines must cover. Third, a minimum time period for public review and comment (90 days) was established. Public review was made mandatory for the draft statement as well. Circulation of the document for interagency review was also made mandatory, whereas announcement in the Federal Register was sufficient previously.

The primary thrusts of the 1971 guidelines were "to make the detailed statements public before action was taken, to re-emphasize the Executive Order's intent that the statements be linked to the decision process, and to remedy omissions that had become apparent in the interim guidelines" (ibid;34). The revisions still emphasized procedural aspects, however.

The 1971 guidelines were supplemented later in 1971 and in 1972 by a series of "memoranda" by CEQ. Unlike the guidelines, the memoranda included guidance concerning the content of agency guidelines and EISs. These were generally in response to court decisions following publication of the 1971 guidelines, and gave agencies more explicit recommendations on what was appropriate content (ibid).

In response to continued concerns relating to the quality of EISs and use of the information by agencies, in August 1973 CEQ issued a full revision of its guidelines. This edition was much more detailed and concrete than its predecessors and emphasized new policy positions (CEQ,1973).

The 1973 guidelines stressed substantive policy as described in Sections 101 and 105 of the act, rather than just the procedures for compliance with Section 102(2)(C). Renewed focus was placed on national environmental goals. To this end, guidance was presented concerning other paragraphs of Section 102 for the first time. The new guidelines served to make more explicit the intended integration of impact assessment with processes of planning and decision-making by amplifying guidance on early coordination and interdisciplinary study (Anderson,1976: CEQ,1973).

While the CEQ provided a basis for agencies to develop their own procedures for NEPA compliance, problems with implementation became apparent during the first half of the 1970s that were not effectively addressed in the guidelines. These problems included cumbersome agency procedures that

resulted in delays and overly long EISs that often did not aid decision-making. Compounding the situation was the fact that the CEQ guidelines were not legally binding; agencies were not required to consider the Council's recommendations, and courts ruled that non-compliance with the guidelines did not constitute a violation of NEPA (South,1986).

1978 CEQ Regulations. To correct this situation, President Carter issued Executive Order 11991 in May 1977 which gave CEQ the power to issue regulations binding on all federal agencies. The regulations became effective in November 1978, and all affected agencies were instructed to rewrite their internal procedures to implement the regulations by July 30, 1979.

The three major goals of the regulations were to reduce paperwork and delays, streamline the EIS process, and produce better decisions. A limit of 150 pages was instituted (300 pages for unusually complex proposals), lengthy descriptions and inventories were to be eliminated, a summary was required, and time limits were set for several aspects of the process (Baldwin, 1985: Yost,1984).

Another important development with the new regulations was the requirement of a new document, the Environmental Assessment (EA). An EA was seen as a tool for streamlining the process. They were to be a short report (15-20 pages) completed early in the planning process with the intent of determining if the project would create significant impacts. Three types of projects were identified in the regulations: categorical exclusions, which are actions that are predetermined as being

not significantly impacting; those actions which require an EIS; and those actions which require an EA to determine if there will be significant impacts. Each agency was required to categorize each of their potential actions into this framework (CEQ, 1979). It is the requirement for preparation of EAs on which the later sections of this paper will concentrate.

The 1978 regulations also introduced the concept of "scoping." This is a process by which preparers of an EIS "identify the range of actions, alternatives, and impacts to be considered in depth in the impact statement and to identify and eliminate from detailed study the issues that are not significant or have been covered in other impact reviews" (Pease and Smardon, 1984; 254). This is to be accomplished by consultation with state and local agencies. Proponents as well as potential opponents are to be consulted. The scoping process is also to be used in timing the EIS in the agency's planning process. Scoping is, in essence, one of the methods CEQ used to streamline the NEPA process and aid interagency cooperation.

The CEQ regulations contained many other provisions to implement the aforementioned goals which changed the NEPA process within agencies, including standardized content and terminology, measures for better integration with other environmental legislation, and new emphasis on analysis of alternatives to eliminate encyclopedic accumulation of useless background material (Black, 1981; Yost, 1984). The intent of NEPA, rather than the procedures, became the primary focus.

The Role of the Courts

There is no mention within NEPA of who is to enforce it. According to Black, "enforcement is actually left up to the public, from which an important principle about NEPA may be inferred: if the public doesn't care, no one else will" (1981;11). The primary tool used by the public for enforcement is the courts - either through litigation or the threat of such action (Liroff,1980). Because of this fact, the courts became the principle enforcers of NEPA (Anderson,1973;16).

The courts moved swiftly to establish judicial review of implementation of the act, and over the years the courts have steadily increased their role in NEPA's implementation. Initially, they "nudged the agencies toward NEPA's goals by policing the impact statement procedures" (Koo,1984;199). These cases dealt primarily with standing to sue, allegations of the need for an EIS when one was not prepared, or inadequacy of a document judged by the procedural requirements, such as analysis of alternatives or consideration of all known impacts (Anderson,1973: Erickson,1979). However, even in the early years after passage of the act, a number of cases established that the courts were likely to go beyond procedural compliance with the provisions of Section 102 and consider the intent, or substantive requirement, of Section 101 of NEPA. Substantive review considers the question of whether or not a federal agency can be prohibited from taking an action, or be compelled to modify the action after procedural compliance with NEPA has been satisfied (Koo,1984;200).

In 1972, the appellate court ruled in Calvert Cliffs' Coordinating Committee v. Atomic Energy Commission that federal agencies must consider in good faith the information developed for an EIS. In that same year, the Court of Appeals ruled in Environmental Defense Fund v. Corps of Engineers that there was judicial responsibility to assure that agency decision-making was not arbitrary and capricious (Anderson, 1973; Baldwin, 1985). Clearly, compliance with the intent of NEPA was demanded by the courts, and preparation of an EIS merely to satisfy the letter of the law was not satisfactory.

Upon his review of NEPA litigation through 1975, Erickson (1979) distilled four characteristics of the act which courts have consistently upheld. These are:

1. NEPA is a full disclosure law.
2. The EIS required by NEPA should be understandable to laymen and also sensitive to the technical and scientific needs of experts.
3. The EIS is a decision-making tool.
4. The EIS, as a decision-making tool, requires interdisciplinary inputs.

While these characteristics do not cover all of the requirements of NEPA, they do represent the most critical aspects in terms of legal tests.

While circuit courts were interpreting NEPA in such a way as to give it substantive content, the Supreme Court was not. In several cases since 1975, most notably Aberdeen Rockfish Railroad v. SCRAPP (1975), Kleppe v. Sierra Club (1976), and

Stryckers' Bay Neighborhood Council v. Karlen (1980), the Supreme Court has overturned earlier rulings and has contended that NEPA's mandate to agencies is "essentially procedural" (Rubin,1980). Especially in Stryckers' Bay, the opinion of the court was that as long as the procedural requirements of NEPA are met, the duties mandated by the act have been satisfied. These decisions are offset somewhat by the 1978 CEQ regulations, which include substantive requirements for agencies, and a provision for the courts to share the responsibility for enforcing the substantive requirements of Section 101 . The judicial role in implementing substantive compliance with NEPA clearly has not been resolved (Koo,1984).

Most of the litigation surrounding NEPA has been in relation to procedural or substantive questions concerning EISs. The question of where an EA fits into the legal structure is another matter, as the legal nature of EAs is different from that of EISs. First and foremost, an EA is not required by NEPA. The first mention of this document, as we have seen, is in the 1978 CEQ regulations. Section 1501.3 of the regulations states, "agencies shall prepare an environmental assessment when necessary under the procedures adopted by the individual agencies...(underscore added). Therefore, EAs are not required by legislation or regulation, but by internal agency procedures. As stated previously, according to the regulations, an EA is to be prepared for actions that are not categorically excluded nor automatically require an EIS. Theoretically, an agency could classify all

actions in these two groups, thereby eliminating the need for EAs, although this has not been the case.

Because EAs are not required by regulation, the documents are not legally challenged on the basis of compliance with NEPA. Instead, litigation concerned with the adequacy of an EA is directed primarily at compliance with the internal agency guidelines. These guidelines require approval from CEQ, so NEPA compliance questions relating to the guidelines are considered at this early stage. However, the goals and procedures presented in NEPA are in practice used as evidence in challenging the adequacy of EAs, so the documents are in reality subject to litigation regarding adequate procedural compliance (Taylor, personal communication). Cases involving EAs generally relate to actions that an agency has determined through its assessment do not require an EIS, and the plaintiff alleges one is required. A Finding of No Significant Impact (FONSI) can also be challenged, even if the EA is determined to be sufficient, on the grounds that the incorrect decision was made (Skillern, 1983).

THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

In theory, an EA or EIS is simply a documentation of predicted potential impacts of a proposed federal action and a discussion of alternatives. The process of developing the document can be quite complex, however. The processes involved in NEPA compliance have been standardized since the 1978 CEQ regulations, and are depicted in figure 1.

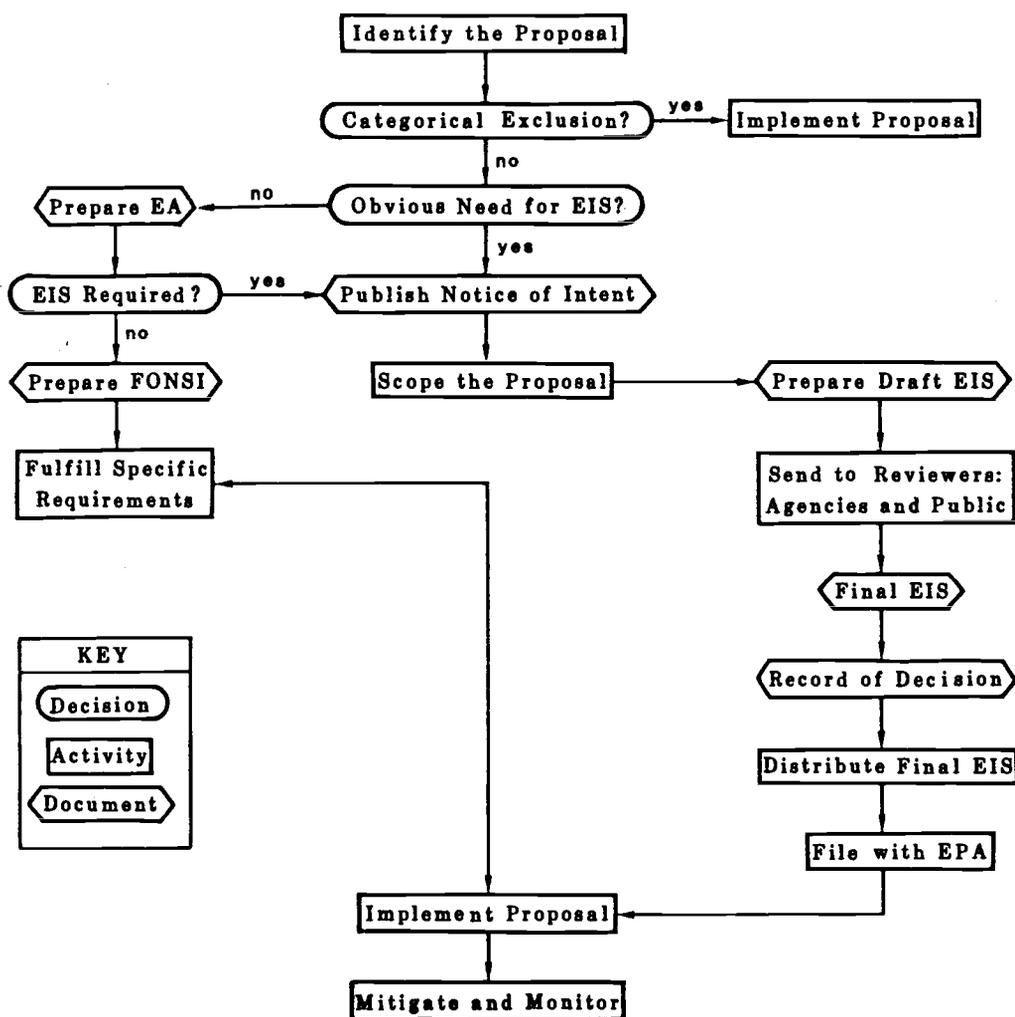


Figure 1. The environmental impact assessment process (after Kitto and Burns, 1980).

The step of greatest concern here is the "prepare EA" phase. This step is given only cursory treatment in most books and articles dealing with environmental impact assessment procedures, probably because it is considered a minor phase in the overall NEPA process. This is true for large or controversial projects which are likely to impact the environment significantly, and thus require an EIS. But EAs are prepared ten times more often than EISs, so the procedures for their development are important to those engaged in impact assessment (Canter, 1984; 19).

Up to this point, NEPA and its development have been treated in a general manner. The remainder of the paper will deal specifically with the NEPA process as it pertains to the Federal Aviation Administration (FAA) and preparation of environmental assessments by private consultants for projects administered by that agency.

THE FAA AND NEPA

Prior to the enactment of NEPA, the FAA did not make environmental matters a prime consideration in airport planning. During the early years of the 1970s, environmental documentation was seen as merely a formality and used as justification for decisions that had already been made. Currently, environmental factors are considered early in the planning process and help guide the course of decision-making (FAA,1985b;47). This is illustrated by tracing the development of one of the leading texts in the field of airport planning. In its first edition, Planning and Design of Airports (Horonjeff,1962), not suprisingly, did not consider environmental planning at all, while in the second edition (ibid, 1975) two pages were devoted to the subject. But in the third edition (Horonjeff and McKelvey,1983) an entire chapter covers various aspects of NEPA-mandated environmental planning.

This development of environmental concern may have been because of legal actions taken against the agency, resulting in the outlook that preparing EISs was more expedient than engaging in litigation. While the FAA did not experience an unusually high number of NEPA-related cases in the formative years of the process (27 through June 30, 1976), its parent organization, the Department of Transportation, as a whole had the most NEPA cases of any federal agency (188 cases or 24 percent of all NEPA litigation)(CEQ,1977). The concern for environmental planning procedures likely had a trickle-down effect from the parent agency to the FAA.

That the FAA has integrated environmental considerations into the larger process of airport planning is apparent from their published guidelines (FAA,1985a and 1985b). Therefore, some background of the overall planning procedures within the agency is needed.

The Airport Planning Process in the FAA

Any airport that receives funding through the FAA is required to submit a plan to the FAA that details the anticipated future development of the airport. The key document associated with this requirement is the Airport Layout Plan (ALP), which is a graphic presentation of existing and ultimate airport facilities and their location on the airport (FAA,1985b;58). Associated with the development of the ALP is the Airport Master Plan. The master plan is not required by the FAA, but in practice is completed by all but the smallest airports (Soliday, personal communication). The master planning process is intended to "provide guidelines for future airport development which will satisfy aviation demand in a financially feasible manner, while at the same time resolve the aviation, environmental and socioeconomic issues existing in the community" (FAA,1985b;2). "Development" in this case refers to the development of aviation and nonaviation uses on the airport site as well as the surrounding area (Horonjeff and McKelvey,1983).

Environmental assessment is reliant on the master planning process to identify the goals and needs of the airport in order

to define needed developments for which an environmental study may be required. The development alternatives are also identified during the planning process before the formal environmental study is initiated (FAA,1985a). The development of alternatives in the early stages of planning focus on the needs of the airport in relation to aviation factors, such as meteorological conditions and obstructions, and financial considerations (Horonjeff and McKelvey,1983). Environmental impacts may influence the choice of alternatives from the outset, but formal consideration of these factors for NEPA compliance will not yet have begun, and these preliminary considerations would likely occur even if an environmental assessment would not be required.

The environmental assessment begins soon after the alternatives are identified. At this point, compliance with NEPA is a prime consideration.

Section 102 Considerations in Airport Environmental Planning

As we have seen, Section 102(2)(C) of NEPA requires impact statements to be written on "major federal actions significantly affecting the environment." It is this requirement that will be considered here.

Major Federal action. Many early NEPA-related court cases involved the interpretation of terms. "Major" and "federal action" are among those terms. Some actions are clearly federal, for example construction of a dike by the Bureau of Reclamation. Other examples are not as obvious. The question

of whether the action is major can be equally unclear. Through the litigation process, definitions of the terms have been derived. Direct construction activities, direct funding, and licensing by the federal government all qualify as federal actions, as do some proposed legislation and regulations (Baker, et al,1977: Golden, et al,1979). The word major is construed by CEQ as reinforcing to but not independent of the term significant. Therefore, the action is major if it is determined to be significant (Anderson, et al,1984;703). In the context of the FAA, the most common federal action that requires environmental assessment is direct funding of airport developments under the Airport Development Aid Program (FAA,1985a: Horonjeff and McKelvey,1983).

Significantly affecting the environment. As required by CEQ, the FAA has categorized potential actions into three groups: categorical exclusions, actions normally requiring environmental impact statements, and actions normally requiring environmental assessments. Categorical exclusions are actions deemed minor, and include specific construction, repair, and installation actions, landscaping, and administrative and financing procedures such as advisory actions and issuance of planning grants. Actions normally requiring environmental impact statements include new runways, first time ALP approval for air carrier airports in metropolitan statistical areas, and adoption of a new National Airport System Plan.

Actions normally requiring environmental assessments are identified by the FAA (1985a;10) as follows:

1. Airport location.
2. New runway.
3. Major runway extension.
4. Runway extension which would permit use by nosier aircraft than that for which the pavement was previously designed.
5. Major new construction or expansion of passenger handling or parking facilities.
6. Land acquisition associated with the above items or which causes relocation of residential or business activities.
7. Establishment or relocation of an instrument landing system, an approach lighting system, or runway end identification lights.
8. Development action that impacts wetlands, endangered or threatened species, historical or cultural resources, or public park or wildlife refuge lands.

In addition to these specific developments, actions normally excluded that are considered to produce "extraordinary circumstances" will be subject to environmental assessment. These circumstances are generally those that prove to be controversial on environmental grounds or due to disruption of established community activities. These situations call for an EA to determine the significance of the action (ibid).

In order to determine whether an EIS is necessary, the level, or significance, of impact of the development must be

examined when preparing the EA. As required by CEQ regulations, the FAA has determined a threshold level of impact for each impact category wherever it could be quantified, above which an impact is considered significant. The impact categories and threshold levels will be discussed in more detail in a later section of the paper.

The Role of the FAA

NEPA places the responsibility of environmental protection on all agencies of the federal government. The FAA has chosen to delegate the preparation of environmental assessments to airport sponsors, i.e. the airport applying for funding assistance. The FAA is responsible, however, for "analyzing the environmental impacts and consequences of a proposed Federal action involving airports, for the environmental assessment and related documents, and ultimately for approving or disapproving the environmental documents and the Federal action" (FAA,1985a;6). The agency is responsible for the facts and judgments upon which the environmental determination is based.

Because the FAA is responsible for EAs, but does not prepare them, its role during the development process is that of advice and review. According to established procedures, the agency's first involvement is review of the sponsor's proposal and public involvement schedule. In reality, the sponsor consults with the FAA from the initial stages of the planning process, even prior to application for assistance, so that

continuous coordination is maintained and unforeseen delays are minimized (Taylor, personal communication). Review of the proposal is followed by review of the draft EA , and ultimately review of the findings of the final EA. At any point during the process, if the FAA is not satisfied with the sponsor's actions or decisions, advice is provided concerning methods of rectifying the discrepancy. It is the agency's responsibility to determine the outcome of the environmental assessment (EIS required or FONSI), so the agency oversees the entire process to insure that NEPA procedures have been followed and the appropriate decision is made (FAA,1985a).

The Roles of the Sponsor and Consultant

The role of the sponsor in the NEPA process starts with initiation of the proposal, including identification of the problem and needs of the airport. When this has been accomplished, the alternative courses of action to deal with the problem are identified. The sponsor-consultant relationship will begin at the point that the sponsor cannot adequately complete the necessary tasks. For a small project, identification of the needs and problems may be fairly obvious, obviating the need for consultant aid. More complex projects may require inventories, forecasts, or demand/capacity analysis, or a combination of these studies. In these cases, the sponsor may need the assistance of a consultant early in the process (FAA,1983 and 1985a).

Once the sponsor has secured a consultant, their roles are essentially identical in the eyes of the FAA. Like the FAA's relationship with the sponsor, the sponsor's relationship with the consultant is largely advisory concerning the activities the consultant has contracted to perform. These activities will likely include obligations in all phases of the planning process, but it is the environmental portion of the planning process that is of concern here. All phases of the environmental assessment will likely be handled by the consultant, with input from the sponsor, from interagency coordination and public involvement to writing and distributing the documents (Soliday, personal communication).

THE EA DEVELOPMENT PROCESS

There are two primary goals associated with the process of environmental assessment. These are 1) to develop information on which to base decisions and aid in planning, and 2) to produce a document that complies with NEPA and internal agency procedures. These are not conflicting goals, but both must be kept in mind during the development process.

This section of the paper details the procedures to be used in the process of researching and writing EAs for projects administered by the FAA. The impetus for this study was the need for a set of written procedures to be used by environmental planners in order to streamline that process. The written procedures will be in the form of a checklist with incorporated explanatory text (see Appendix). These written

procedures will hereinafter be referred to as the guide. The steps involved in EA development and the contents of the guide are the theme of the remainder of this paper.

Steps in the EA Development Process

This section will expand on the "Prepare Environmental Assessment" portion of the overall NEPA process (figure 1). There are somewhat standardized steps taken in the development of an EA. These are:

1. Identify alternatives,
2. Identify potential impacts,
3. Determine if impacts are significant,
4. Prepare pre-draft EA,
5. Submit to sponsor and FAA for review,
6. Prepare draft EA,
7. Circulate draft EA to agencies and public for review,
8. Hold public hearing, and
9. Prepare and release Final EA.

Discussion of each of these steps follows.

A note on nomenclature should be added here. The terms environmental assessment and assessment will be used to refer to the process and activities of determining potential environmental impacts, while term EA will refer to the document.

Identify Alternatives

As previously mentioned, alternatives to the proposed development are developed early in the planning process. Not all of these alternatives will continue to be considered during assessment, although all considered alternatives will be mentioned in the EA. In some cases, such as a site selection,

all potential alternatives will be examined, but only the acceptable ones in terms of solving the problem will actually undergo environmental assessment.

CEQ regulations require that the do-nothing, or no-build, alternative be considered. In addition, "a rigorous exploration...of all reasonable alternative actions, particularly those that might enhance the environmental quality or avoid some or all of the adverse environmental effects, are essential" (Department of Transportation, 1979;3). In the case of airport developments in response to increased aviation demand, this may mean the provision of transferring some or all of the additional demand to other airports (FAA,1985b). This may not prove to be a feasible alternative, and would thus be eliminated from study.

Identify Potential Impacts

Identification of potential adverse impacts is the first formal phase of environmental assessment that is distinct from the other phases of airport planning. The CEQ regulations refer to this step as "scoping" when it is related to EIS development, but the process is much the same when dealing with EAs although the term is not used by CEQ in this context.

The purpose of scoping is to define the issues and procedures specifically needed for the action proposed at the earliest possible stage in the planning process (Black, 1981;16). It entails coordination of agencies at the federal, state, and local level, and the affected public. This

coordination satisfies the NEPA requirement for an interdisciplinary approach. A section of the guide is devoted to the agencies to be contacted routinely during the scoping process, and the agencies with jurisdiction over specific problems identified during scoping. Agencies are generally contacted in writing, with the scoping letters asking for comments on specific potential impacts as well as a general call for environmental concerns. The level of public involvement will vary according to the complexity or controversy associated with a particular development. The FAA has developed guidelines for procedures of public involvement in the airport planning process (FAA,1975).

Determine if Impacts are Significant

The anticipated result of the scoping process is identification of environmental impacts, and specific concerns from agencies and the public related to potential significance. There have been many methods devised to identify the level of impact on the various aspects of the natural and human environment (for discussion of many of these techniques, see Westman,1985 and Canter,1977). The purpose of an EA, however, is only to determine if the impact is potentially significant, not to define the absolute level of impact. For this reason, many of the techniques used in impact prediction are relevant when developing an EIS but not an EA.

Once impacts have been identified, established criteria are used to determine if they are potentially significant, or

above a "threshold" impact. FAA guidelines (1985a) define this threshold level for many of the elements of the environment. Some thresholds are quantifiable, and some have a relatively distinct definition. Others are dependent on interrelated factors, so there is no set threshold level. These situations require a judgment to determine if an impact is significant. The responsibility for this judgment is generally placed on public agencies with jurisdiction over a particular element of the environment, for example the U.S. Fisheries and Wildlife Service for endangered species. The significance threshold for each impact category is included in the guide. It should be noted that the FAA functions in an advisory capacity during this step if assistance is needed in interpreting guidelines.

Prepare Pre-draft EA

This step entails preparation of the EA in as complete of form as possible. It is considered a pre-draft at this point because it is still subject to revision before it is released for general review. This step is not a part of the established procedures, as presented in FAA guidelines, but is in reality a distinct step (Soliday, personal communication).

The format of an EA is similar to that of an EIS, but the depth of analysis is less involved for an EA. The chapters of

an EA are standardized, and consist of the following:

1. Purpose and Need
2. Alternatives
3. Affected Environment
4. Environmental Consequences
5. Appendices

Each of these chapters is covered in the guide, with a checklist that presents the requirements of the contents, as specified by FAA (1985a).

Purpose and Need is to be a short chapter that identifies the problem and the requested federal action. Relevant statistical information to document the existence of the problem is to be included here.

The Alternatives chapter describes each alternative briefly, and identifies the proposed action. Any identified potential significant impacts must be identified in the discussion of alternatives, and any mitigation measures assumed to be built into the alternative are to be discussed. The FAA encourages the preparer of the EA to use a matrix of alternatives and impacts to aid in analysis, especially for complex proposals or ones with several potentially significant impacts (Taylor, personal communication).

The Affected Environment chapter presents the pre-development situation. Population and industry characteristics of the project area are to be presented, as are existing and planned land uses, places of public assembly, and noise sensitive receptors. The purpose of this chapter is

largely to define the baseline conditions from which impacts of the proposed action can be assessed (Baldwin,1985).

Environmental Consequences is divided into twenty "specific impact categories." The impact categories are the elements of the environment to be assessed for potential impact. Under each category, the impacts of each alternative are discussed, along with proposed mitigation measures and conditions requiring further study if necessary (FAA,1985a). The majority of the guide deals with this chapter, as each impact category presents unique requirements for assessment.

The appendices include all correspondence from governmental agencies. These will be the responses to scoping letters; agencies and the public will also have the opportunity to respond to the draft EA upon release. Any documentation supporting statements in the body of the EA are also to be included as an appendix. Other information to be included in the appendices includes a list of agencies and persons consulted and air and water quality certification if available. A list of preparers is also required, although this is not considered a part of the appendices by the FAA. The list should include the education, experience, and areas of input for each preparer. This primarily applies to people that prepared special studies for the assessment or consultants with which the FAA is not familiar. Consultants that have been engaged in environmental assessments for the FAA in the past are not required to detail their qualifications (Taylor, personal communication).

Two final considerations that require assessment do not fit into the above format, but must be considered during assessment. First, the cumulative impact of the total proposal must be considered. For example, a proposal calling for a runway extension in two phases must consider the impacts of the overall project, not just the first phase. Cumulative impacts should be discussed wherever applicable throughout the EA. Second, design, art, and architectural considerations shall be reflected "to the extent relevant" in EAs (FAA,1985a;22).

Submit Pre-draft EA to FAA and Sponsor

The pre-draft EA is submitted by the consultant to the FAA and the sponsor for review before release to the public. This submission is not required by FAA procedures, but is a generally accepted practice. The pre-release review should identify any statements in the EA that are inconsistent with the sponsor's or agency's policy so that they can be revised or removed in order to avoid controversy later in the process (Taylor, personal communication).

Prepare and Circulate Draft EA

Any revisions or additions deemed necessary by the FAA or sponsor are accomplished by the consultant prior to release. Significant changes may be required, or there may be virtually none. This depends on the accuracy of the statements made within the pre-draft (ibid). The document is circulated to relevant federal, state, and local agencies and the public.

Relevant agencies include any with jurisdiction by law or special expertise with respect to the impacts involved. Any person, organization, or agency requesting an EA shall be provided with one. Interagency review is facilitated by what is commonly referred to as the A-95 process. This is a single point of contact that distributes documents, generally to local agencies. Not all states have a coordinated A-95 process intact, however (FAA,1985a;61).

Hold Public Hearing

The opportunity for public hearings are required for a variety of federal actions, including those that require EAs. A hearing is not required per se, but a notice of the opportunity for one is. If a hearing is not requested upon notification, no further responsibility is held by the sponsor or consultant. The notice of the opportunity for public hearing can be bypassed, in which case a public hearing is scheduled (FAA,1972).

The public hearing is to be held no less than 15 days after the notice of opportunity for a hearing, or 30 days after release of the EA. A transcript of the hearing is to be made although the issues can be summarized in the EA (FAA,1985a;63). It is in the consultant's best interest to hold the hearing as soon as possible after release of the draft, so work can commence on the final EA.

Prepare and Release Final EA

Any concerns regarding the contents of the draft EA will be brought out in interagency and public review. Any inconsistencies or inaccuracies that are identified shall be corrected in the final document, along with any new information determined necessary.

These concerns are documented in correspondence from the agencies or citizens that reviewed the draft, and this correspondence is to be included in the appendices of the final EA along with the issues raised at the public hearing. CEQ regulations require a response to all comments on the draft EA. These are completed by the consultant.

Once the EA has been released and approved by the FAA, it becomes a public document, and the agency bears full responsibility for the decisions made based on the findings of the assessment. The choice at this time, as portrayed in figure 1 is between a Finding of No Significant Impact and determination that an EIS is required. Since this decision is made at the federal level, the work of the consultant and the sponsor is complete regarding environmental planning.

RECOMMENDATIONS

The processes associated with the development of EAs is very standardized, so a set program can be devised, and, if followed, reduce the time required to complete the writing of the document. Insofar as an EA is intended to be a short document that presents only enough information to make a determination on the significance of impact, the contents of an EA should include little information not presented as elements of the guide. It is recognized, of course, that supplementary studies will frequently be required in the event that potential impacts are identified, but routine analysis beyond that required by FAA guidelines is not encouraged.

While substantive content that aids decision-making is a sound goal, this may not be the result of indepth study of an insignificant impact. Verbosity or unnecessary analysis is time consuming for the consultant as well as the agencies that review the document, and does not result in better decisions.

Some suggestions concerning style are also in order. The following points are gleaned from Canter (1977) and Garing, et al (1974):

1. Do not use cliches or catch words.
2. Make it clear and succinct, simple and direct.
3. Include both pro and con information. Avoid value judgments.
4. Attempt to provide continuity from section to section.
5. Include liberal usage of maps, drawings, and graphs.

There are of course many other suggestions that could be presented concerning style, but the above points represent those that are most frequently violated in writing environmental documents.

CONCLUSIONS

NEPA and its concomitant regulations, procedures, and court cases have led to a sustained regard for environmental values in the decision-making structure of the federal government. Although the act has undergone a continual process of evolution over the last decade and a half, there is no reason to suspect that the process will not continue to be dynamic well into the future. Any aids to environmental planners that simplify or direct the sometimes confusing procedures can only be positive, not only for the continued viability of the planner's employment, but for efficiency in fulfilling the intent of NEPA - protection of the natural and human environments.

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APPENDIX

A GUIDE FOR PREPARING AND WRITING ENVIRONMENTAL ASSESSMENTS

Prepared by Rob Hallyburton

Project: _____

Project Manager: _____

Date Draft Completed: _____

Date of Public Hearing: _____

INTRODUCTION

This document is intended as a guide for preparation of Environmental Assessments for projects administered by the Federal Aviation Administration. This is a summary of procedures and requirements detailed in FAA Order 5050.4A, Airport Environmental Handbook (October 1985), and is not intended to replace that document.

The format of the first section of this guide is that of a checklist with supporting text, organized according to the sequence of chapters to be included in an EA, as presented in 5050.4A. When consideration of an element of the checklist has been completed, an X or check should be entered into the parentheses in the left column. In many cases, a specific element or entire impact category may not be applicable to the project under assessment. In such cases, a slash or zero, or other identifying symbol, should be placed within the parentheses or near the title of the impact category. This will provide the preparer of the EA a quick way to determine what areas require further consideration.

For each impact category a "significance threshold" is provided. This is the level of impact that has been identified by the FAA as indication of the possible need for an EIS.

Suggested mitigation measures are provided in 5050.4A for many impact categories.

Accompanying each chapter and impact category title in this guide is the page number corresponding to that section of 5050.4A, so that quick reference can be made when more information is needed.

The second section of this guide presents agencies that are to be contacted during interagency coordination (scoping). The first part is organized by impact category for quick reference, with agencies that are routinely contacted separated from those that would be consulted only in the event of potential impact. The second part is organized by agency, so that specific areas for comment to be requested in scoping letters can be quickly identified.

EA CONTENT CHECKLIST

I. Purpose and Need

- () Identify the problem, the requested federal action, and the timeframe for such action.
- () Include the relevant statistical data supporting the fact that the problem exists.

II. Analysis of Alternatives

- () List of alternatives, with only enough description to explain them.
 - Include the no-build alternative.
 - Include connected or cumulative actions.
- () Identify sponsor's proposed action.
- () Explanation of reasons why alternatives were eliminated.
- () Include a list or matrix of potentially significant impacts for each alternative, or a statement that the alternative has no significant impacts.
- () List of permits and licenses for each alternative.
- () Appropriate graphics.

III. Affected Environment

- () Location and vicinity maps and ALP.
- () Existing and planned land uses around the airport.
- () Location of noise sensitive receptors and places of public assembly.
- () Community characteristics (population, industry, growth).
- () Contemplated future actions, if any.
- () Interrelated developments (e.g. highway projects) that would produce cumulative impacts.
- () Background material relevant to the study such as previous development, actions by community groups, or other unique factors not belonging in other sections (optional).

IV. Environmental Consequenses

Noise (Page 28)

() Forecast aviation activity for years under consideration.

() Determine if noise analysis necessary:

-Does the forecast of operations exceed 90,000 annual adjusted propeller operations or 700 annual adjusted jet operations? yes ___ no ___

-Is the facility a transport airport accomodating Airplane Design Groups III-VI? yes ___ no ___

-Is the proposal controversial on noise issues? yes ___ no ___

-Will the airport accomodate frequent use of specialty aircraft such as helicopters in proximity to noise sensitive areas? yes ___ no ___

If any of the above questions are answered yes, develop a noise analysis presenting the following data:

() Photobase map showing

-ALP

-Ldn 65, 70, 75 contours (present with and without proposal and future with and without proposal)

-Approach/departure and local flight tracks

-Identification of noise sensitive receptors

-Land use adjacent to airport and impact area

() Assumptions used to calculate noise contours.

() Mitigation measures if necessary.

Significance threshold: Dependent on land use being impacted and the increase in Ldn.

Compatible Land Use (Page 30)

() Discussion regarding proposal's compatibility with local planning, especially as it relates to noise.

() Discussion regarding proposal's compatibility with other impact categories (e.g. wetlands, farmland).

The effects on land use shall be analyzed in this context and described accordingly under the appropriate impact category with any necessary cross-references to the Compatible Land Use section to avoid duplication.

() Documentation on what sponsor and land use authority will do to meet 1982 Airport Act Section 511(a)(5) sponsor's land use assurance.

Land Use Compatibility, continued

Significance threshold: Not applicable because this impact will always be in conjunction with other impact categories.

Social Impacts (Page 31)

- () Location of residents to be relocated.
- () Number of persons to be relocated.
- () Characteristics of households displaced (e.g. minorities, income levels, elderly, renter or owner).
- () Documentation regarding the availability of adequate relocation housing (real estate correspondence).
- () Impact on neighborhood and housing to which relocation is likely to take place.
- () Location of businesses to be relocated.
- () Discussion and graphics of any alteration in surface transportation patterns.
- () Estimate of additional surface traffic, if any.

If the proposal will not involve the need to relocate any residence or business, alter surface transportation patterns, divide or disrupt established communities, disrupt orderly planned development, or create an appreciable change in employment, then no specific analysis is needed and a summary statement to this effect will be sufficient.

Significance threshold: Insufficiency in available housing or a high degree of controversy with respect to relocation.

Induced Socioeconomic Impacts (Page 33)

- () Discuss changes induced by the proposal in population pattern or growth, public service demands, and economic activity.

Induced impacts will normally not be significant except where there are also significant impacts in other categories, especially noise or direct social impacts.

Air Quality (Page 33)

- () Use air quality screening methodology in FAA Air Quality Handbook (FAA-EE-82-21).
- () Air quality analysis if required.

Air quality threshold levels and analysis procedures are explained in the Air Quality Handbook.

Water Quality (Page 35)

- () Describe design, construction controls, and mitigation measures to insure that state and federal water quality standards will not be violated.
- () Discuss such factors as storm and sanitary sewer design, requirements for additional water supplies or waste treatment capacity, erosion controls, provisions for containing fuel spills and waste water from aircraft washing, and designs to preserve existing drainage or to minimize dredge and fill where applicable.
- () Permitting agency coordination must be documented.
- () Consult EPA if sole or principal drinking water source is involved.

For most airport actions, significant impacts on water quality can be avoided by design considerations and other mitigation measures. If an assessment demonstrates that water quality standards can be met and that no anticipated permit difficulty is indicated, it may be assumed that there would be no significant impact.

Significance threshold: Dependent on state water quality standards. Consultation with state and federal permitting agencies necessary.

DOT Act Section 4(f) (Page 36)

- () Discuss any public parks, recreation areas, wildlife refuges, or historic site of local, state, or federal significance impacted by the proposal.
- () Provide strong evidence that the proposed action is the only feasible or prudent alternative if Section 4(f) land affected.

DOT Act Section 4(f), continued

When there is an actual physical taking of Section 4(f) land in conjunction with an airport proposal, there is no latitude for judgment regarding Section 4(f) applicability. When there is no physical taking but there is the possibility of use or adverse impact to Section 4(f) land, the FAA must determine if the activity associated with the proposal conflicts with or is compatible with the normal activity associated with this land.

() Mitigation measures where necessary.

Significance threshold: Physical taking or conflict with normal activity of Section 4(f) lands.

Historical, Architectural, Archaeological, and Cultural Resources (Page 38)

- () Evidence of coordination with State Historic Preservation Officer (SHPO).
- () A copy of the final report resulting from the field reconnaissance survey, if one is requested by SHPO.
- () Coordination with SHPO and National Park Service if reconnaissance survey indicates artifacts of significance.
- () An artifact recovery plan and implementation plan if necessary.

If any property in or eligible for inclusion in the National Register of Historic Sites has been identified within the area of the proposed action, a Determination of No Effect (concurring by SHPO) shall be included.

Significance threshold: Determined by SHPO.

Biotic Communities (page 41)

- () Discuss concerns related to impacts on water resources.
- () Discuss impacts on wildlife habitat.
- () Mitigation measures if necessary.

If the proposal would impact only man-dominated areas such as previously disturbed airport property, populated areas, or farmland, it may be assumed that there would be no significant impact on biotic communities.

If the proposal would impact other than man-dominated areas, but impacts would be minor or primarily transient, rather than permanent, it may be assumed that there would be no significant

Biotic Communities, continued

impact on biotic communities. "Minor" generally refers to a small percentage of the area's inventory or an area which supports a limited variety or number of common wildlife species.

If the proposal would involve the removal of a sizeable amount of habitat, of habitat supporting rare species, or of a small, sensitive tract, but the accompanying loss of plant communities and displacement of wildlife do not result in a significant long-term loss to the area, it may be assumed that there would be no significant impact on biotic communities.

Significance threshold: 1) Removal of sensitive tracts occupying strategic position in the vicinity or which support rare species or which constitute a large percentage of the remaining habitat of a particular kind. 2) Removal of an amount of habitat which would result in decreased wildlife carrying capacity of the overall area.

Endangered and Threatened Species (Page 43)

- () If endangered or threatened species are present in the area affected by the proposed action, a biological assessment shall be prepared to identify expected impacts upon that species.
- () Consultation with USFWS may be necessary depending on the degree of impact found in the above biological assessment.
- () Mitigation measures if necessary.

Significance threshold: Any adverse impact identified in the biological assessment on endangered or threatened species or on critical habitat is considered a potential significant impact.

Wetlands (Page 44)

- () All means shall be employed to avoid development in wetlands.

Should the proposal involve wetlands and there is no practicable alternative, the EA shall include:

- () Location, types, and extent of wetland areas to be impacted.
- () Evaluation of significance of impact, water quality impacts, and flooding.
- () Measures for prevention of direct discharge of surface and waste water into sensitive areas.
- () Results of coordination with state and local natural resource and wildlife agencies and USFWS and/or National Marine Fisheries Service.

Wetlands, continued

- () Identification of permits required and agency requirements before permit can be granted.
- () Coastal zone implications.
- () Section 4(f) implications.
- () Mitigation measures if necessary.

If the proposal would effect wetland areas and there is a practicable alternative which solves the problem and avoids the wetland impact, this alternative should become the proposed action. Whether another alternative is practicable depends on its feasibility in terms of safety, meeting transportation objectives, design, engineering, environment, economics, and other applicable factors. Additional cost alone does not necessarily make an alternative impracticable.

Significance threshold: Evaluations of other impact categories are to be used to determine whether impacts on wetlands appear significant. Of primary concern are water quality, biotic communities, floodplains, induced development, and construction impacts.

Floodplains (Page 47)

- () Avoid taking any action in a 100 year floodplain where practicable.
- () If the proposal is not in the 100 year floodplain, but near it, the EA should document those measures to be implemented to insure that the floodplain will not be impacted.
- () Determine if the proposal is located in a Special Flood Hazard Area A or V.

-Federal agencies are prohibited from providing financial assistance for acquisition or construction of buildings in these areas.

If the proposed action and reasonable alternatives would encroach within a 100 year floodplain, the following instructions apply:

- () Indicate briefly why there are no practicable alternatives outside the floodplain.
- () Include map information, analyses, and mitigations. Consider any risk to or resulting from the action in the floodplain, including long-term loss of available flood storage volume.

Floodplains, continued

- () Identify any state or local floodplain regulations or standards that must be adhered to, and indicate if the proposed action will conform.

Significance threshold: 1) A considerable probability of loss of human life; 2) likely future damage associated with encroachment that could be substantial in cost or extent, including interruption of service or loss of vital transportation facility; or 3) a notable adverse impact on natural and beneficial floodplain values.

Coastal Zone Management Program (Page 51)

- () If a state coastal zone management agency objects to the proposed action due to lack of information in the EA, the agency must describe the type of information it needs to make a consistency determination.
- () The agency should identify the inconsistent elements of the proposal and what mitigation measures would permit consistency.
- () An objection by a state CZM agency may be appealed to the Secretary of Commerce.

Significance threshold: Determined by state CZM agency.

Coastal Barriers (Page 53)

- () Determine if the proposal involves undeveloped coastal barriers along the Atlantic or Gulf coasts.

If yes, consultation with USFWS is required.

Wild and Scenic Rivers (Page 53)

- () Determine if the proposal may impact a river included in the National Wild and Scenic River System.

If yes, the EA must examine the project's impact regarding:

- () Destruction or alteration of the free flowing nature of the river.
- () Introduction of visual, audible, or other sensory intrusions which are out of character with the river, or will alter its settings.

Wild and Scenic Rivers, continued

- () Deterioration of water quality.
- () Transfer of property interests without adequate instructions for protecting the river or its surrounding environment.

Significance threshold: Determined by the National Park Service.

Farmlands (Page 54)

- () Determine if proposed action will result in conversion of farmland to nonagricultural uses.
- () If conversion will result, determine if Farmland Protection Policy Act (FPPA) applies.

The FPPA is not applicable in the following situations:

- The land was purchased prior to August 6, 1984
- Acquisition does not directly or indirectly convert farmland
- The land is not prime farmland as defined by FPPA
- The land is not unique farmland
- The land has not been determined by a state or local agency to be of statewide or local importance

- () If FPPA applies, follow coordination process with SCS.
- () Document results.

Indirect conversion is any use which would prohibit the land from being farmed in the short or long term.

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, or fiber without intolerable erosion. Prime farmland includes land that possesses these characteristics but is being used to produce livestock or timber. It does not include land in or committed to urban development or water storage.

Significance threshold: Upon completion of Form AD-1006, a score will be assigned to each alternative. A score of less than 160 indicates no significant impact. A score of 160 to 200 indicates a potential significant impact, and the EA must consider the following alternatives:

1. Acquiring land not protected by FPPA
2. Using existing airport property instead of FPPA lands
3. Alternate sites or airport layouts that would convert fewer protected acres, or land with lower relative value

A score of greater than 200 indicates a significant loss of prime or unique farmland.

Energy Supply and Natural Resources (Page 57)

- () Analyze proposed changes in energy demand (lighting, heating)
- () Evidence of coordination with local power company to determine if new demands can be met with existing or planned facilities, if there are major changes in stationary facilities.
- () Increases in ground transportation need not be examined unless there are substantial increases in such movement or delay time.
- () Estimate natural resources (gravel, asphalt, oil, fill dirt) to be used and a discussion of their local availability.

For most airport actions, changes in energy or other natural resource consumption will not result in significant impacts.

Significance threshold: Demand exceeding supply, substantial use of natural resources in short supply, or greatly increased ground or aircraft fuel consumption.

Light Emissions (Page 58)

- () Discuss lighting changes and local impact. Include characteristics of lights (red, blinking, etc.) and location of receptors that could see and be annoyed by the lights.
- () Measures to mitigate impact.

Normally, it may be concluded that no significant impact will occur as a result of light emissions.

Solid Waste Impacts (Page 58)

- () Consider whether projected quantity or type of solid waste generation or method of collection or disposal will be appreciably different than would be the case without the action.
- () Determine location of solid waste disposal facilities within 1500 meters of runways to be used by piston aircraft and within 3000 meters of runways to be used by turbojet aircraft. These are incompatible uses.

Airport actions which relate only to airfield development will not normally include any direct relationship to solid waste collection or disposal other than that associated with the construction itself.

Significance threshold: To be determined through consultation with local officials.

Construction Impacts (Page 59)

- () Discussion of water, air, noise, and other impacts resulting from construction, and the extent to which these effects are subject to local, state, or federal ordinances or regulations.
- () Mitigation measures.

Many of the specific types of impacts which could occur will be covered in other impact categories.

- () To the extent not covered elsewhere, this item shall include a general description of the type and nature of construction and measures to be taken to minimize potential impacts. As a minimum, reference should be made to the incorporation in project specifications of the provisions of AC 150/5370-10, Standards for Specifying Construction of Airports.

Significance threshold: To be determined by FAA for individual situations.

V. List of Preparers

- () Include name, education, experience, and areas of input into the EA.

VI. Appendices

- () Any documentation used to support elements of the EA.
- () Air and water quality certification if available.
- () List of agencies and persons consulted.
- () Evidence of agency comments and responses.
- () Summary of citizen involvement.
- () Summary of significant comments expressed in public hearing, and sponsor's response to comments.

LIST OF AGENCIES BY IMPACT CATEGORY

Noise: Routine - N/A
Significant increase - FAA

Compatible Land Use:
Routine - Local planning department
Significant impact - FAA

Social Impacts: Routine - Local planning department, local and state social agencies, HUD
Resident relocations - Real estate agencies
Road relocations - Local and state road departments

Induced Socioeconomic Impacts: N/A

Air Quality: Routine - Local and state environmental agencies with jurisdiction over air quality

Water Quality: Routine - N/A
Potential impact - USFWS, State Fish and Game, EPA, Corps of Engineers

DOT Section 4(f): Routine - N/A
Potential impact - Agency owning affected property and DOI. HUD or USDA when pertinent

Historical, Architectural, Archaeological, and Cultural Resources: Routine - State Historical Preservation Officer
If Register of Historic Sites involved - National Park Service

Biotic Communities: Routine - USFWS, State Fish and Game
Impact on water resources - same

Endangered and threatened species:
Routine and all correspondence - USFWS

Wetlands: Routine - Local planning agency, USFWS, State Fish and Game.

Floodplains: Routine - State and local agencies that regulate floodplains
If more information needed - Corps of Engineers or Federal Insurance Agency

Coastal Zone Management Program:
Routine - N/A
If project within program boundary - Appropriate state agency

Coastal Barriers: Routine - N/A
If applicable - USFWS

Wild and Scenic Rivers:

Routine - N/A

If potential impact - National Park Service

Farmlands:

Routine and all correspondence - SCS

Energy Supply and Natural Resources:

Routine - N/A

If major increase in energy use - Local power company

Light Emissions: N/A

Solid Waste Impacts:

Routine - N/A

If substantial increase - Local official administering solid waste disposal

Construction:

Routine - SCS

**AGENCIES TO BE CONTACTED ROUTINELY IN SCOPING
AND PERTINENT IMPACT CATEGORY**

Corps of Engineers - Water quality and wetlands

EPA - Water quality

HUD - Social impacts

SCS - Farmland and construction impacts

USFWS - Water quality, biotic communities, endangered species,
and wetlands

State Historical Preservation Officer (or equivalent) -
Historical, architectural, archaeological, and cultural
resources

State Fish and Game - Biotic communities and wetlands

Local planning agency - Compatible land use, social impacts, and
wetlands

Appropriate state and local agencies for the following:

Social impacts

Air quality

Floodplains