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Testimony

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Committee on Public Works and Transportation  
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AIRPORT DEVELOPMENT

Improvement Needed in  
Federal Planning

Statement of Kenneth M. Mead  
Director, Transportation Issues  
Resources, Community, and Economic  
Development Division



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Mr. Chairman and Members of the Subcommittee:

We welcome the opportunity to appear before you to testify on the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems (NPIAS). In 1987, the Committee directed FAA to develop a performance measurement system that would be used to identify future financial obligations of the Airport and Airway Trust Fund. In fiscal year 1992, FAA is authorized to grant up to \$1.9 billion from the Trust Fund for airport development projects to enhance the safety and capacity of the national airport system.

On the basis of state and local airport plans, the current NPIAS identifies \$40 billion of development costs at over 3,300 airports for the period 1990 to 1999. The NPIAS totals the airports' estimated costs in five categories rather than listing each airport's individual projects. All of the development in the NPIAS is eligible for federal aid, but FAA expects that about two-thirds will be funded from local and state sources. Even though the NPIAS provides this extensive listing of airport needs, it is not an effective national plan. It establishes no objectives, offers no options, and does not provide for self-assessment. Although FAA proposes adding some useful supplements to the NPIAS, these additions will not enhance the plan's ability to distinguish among development projects on the basis of their potential to improve the national airport system.

Our purpose today is to discuss changes--in addition to the supplemental information that FAA is planning--that we believe would help to ensure the advantageous use of limited Trust Funds. If the NPIAS is to be an effective plan and a useful tool for policy makers, it should have three elements: goals, credibility, and a way to measure results. Our testimony will discuss these three elements:

- First, specific planning goals are necessary to give direction and meaning to a national airport plan and form a basis for later feedback. At present, NPIAS establishes no measurable, national goals and therefore provides little direction for funding airport improvement projects. If NPIAS did establish goals, FAA officials and airport planners would have a clearer sense of the kind of development that is needed to best improve the national airport system.
- Second, a national airport plan must be based on credible proposals for individual airport improvements, which can be compared consistently with planning goals established for the national system. Not only does the NPIAS not compare work among airports, many consider it a "wish list" because it includes much work that (1) ultimately will not be ranked high enough to be funded, (2) cannot be afforded by the sponsoring airport even with federal assistance, and (3) is scheduled too

far in the future. A national plan would be a more reliable basis for goals if it were built on the 5-year capital improvement plans currently used by most commercial service airports. These plans' shorter horizons (5 years) and smaller scope (containing only projects that stand good chances of being funded) would give a national plan greater credibility.

- Finally, to be effective, a national airport plan requires a feedback mechanism, as directed by the Committee in 1987, to measure the airport system's performance against goals or expected benefits. The NPIAS contains no such feedback mechanism. Although FAA may not currently be able to measure performance precisely, it should continue searching for ways to compare the costs of investments in airports to the benefits achieved. Accurate performance measures would help both the Congress and FAA review airport improvement projects and revise national funding priorities, as necessary, to achieve national goals. Such measures also would provide the Congress with a basis for considering changes in the program's funding structure and would enable FAA to target resources from the Trust Fund to areas where performance feedback indicated that more funding was needed.

In planning for airport development, FAA may find it useful to consider the impact of the recently enacted Intermodal Surface Transportation Efficiency Act on airport development. This legislation requires that highway and mass transit plans be designed, among other things, to improve access to airports and to meet national goals of relieving congestion and improving air quality. Future airport development plans will be more effective if they likewise provide for improving access to airports and meeting other goals and objectives of surface transportation plans.

Before I go into more detail on the three elements of an effective airport plan, I want to provide some background on FAA's planning and funding of airport development.

#### BACKGROUND

The Airport and Airway Improvement Act of 1982 (P.L. 97-248) directs the Secretary of Transportation to publish every 2 years an updated national airport plan--the NPIAS. The act requires that the NPIAS describe the type and estimate the costs of airport development necessary to provide an effective system of airports over a 10-year period. The NPIAS does this for each of almost 3,300 public-use airports eligible for federal aid. Each airport could have from none to tens of projects defining its development plan. For example, Chicago O'Hare's entry in the NPIAS represents 47 projects for the first 5 years.

The NPIAS does not report individual projects, however;

instead it breaks down development costs into five broad categories: special programs--including safety and security--reconstruction, airport and facility standards, upgrade, and capacity. Thousands of other airports, serving mostly general aviation aircraft, are not included in the NPIAS primarily because they are not open to the public.

As a planning tool, the NPIAS represents the first stage of a long federal process through which airports receive grants from the Trust Fund to improve their facilities. FAA's program for approving the grants and providing the funding is the Airport Improvement Program (AIP). Table 1 shows the maximum federal share for various types of projects and airports funded by the AIP. Although this maximum share varies between 75 and 90 percent, the average federal share across the program is about 35 percent.

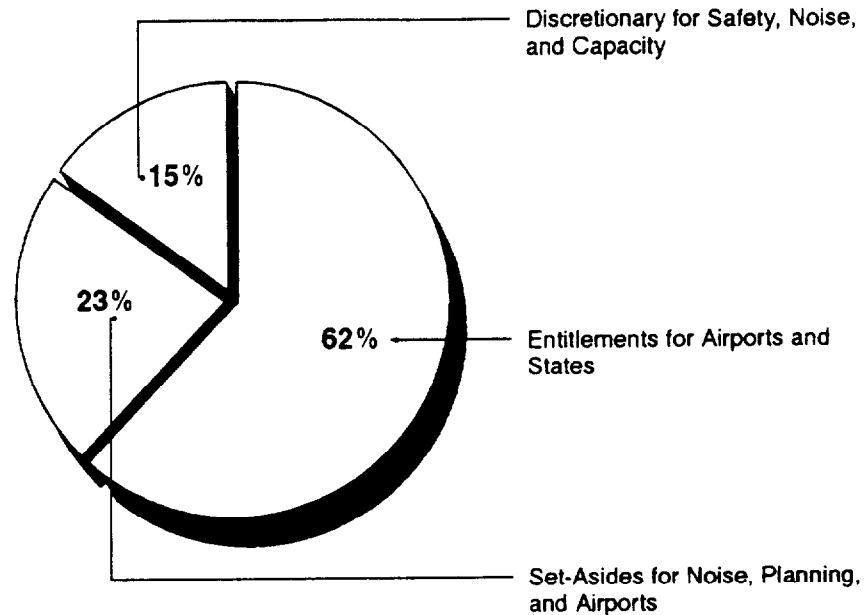
Table 1: Maximum Federal Percentage Share of AIP Projects

<u>Type of Project</u>	<u>Type of Airport</u>	
	<u>Large primary</u>	<u>All others</u>
Airport Planning	75	90
Airport Development	75	90
Noise Compatibility	80	90
Terminal Development	75	75

Source: FAA's Airport Improvement Handbook, Order 5100.38A

As shown in figure 1, FAA distributes 62 percent of the AIP funds as entitlements: 46.5 percent to passenger service airports, 12 percent to states, 3 percent to cargo service airports, and 0.5 percent to Alaska. These entities receive this funding without going through the grant application process. FAA distributes another 23 percent of the AIP funds as set-asides for noise mitigation and other projects and the remaining 15 percent for discretionary projects. Discretionary funds can be used for many purposes, including safety, capacity enhancement, or noise mitigation. FAA can grant the set-aside and discretionary funds to any eligible airport, although minimum funding must be achieved on a national basis in the set-aside categories. Thus, FAA can distribute AIP funds to a single airport in a number of ways, including the airport's entitlements--both cargo and passenger--and planning, noise, and capacity project grants if the airport applies and is approved for such funding.

Figure 1: Distribution of AIP Funds



Source: FAA's Airport Improvement Handbook, Order 5100.38A

A NATIONAL PLAN NEEDS GOALS TO GIVE IT A SENSE OF PURPOSE

Among the elements essential to a national airport plan, we believe that the first is a set of measurable goals. Goals would set expectations for the airport plan as well as establish a basis for measuring performance. Although a number of policy statements govern FAA's funding of airport improvement projects, none is stated in quantitative terms or applied to the NPIAS planning process. Even though FAA intends to supplement the NPIAS with several new types of information, including expanded explanations of project categories and an analysis of airports' sources and uses of funds, the agency still will not have identified measurable goals.

Setting performance goals is not unprecedented in the Department of Transportation. Every 2 years, the Secretary reports to the Congress on the condition and performance of highways and bridges and outlines investment requirements to achieve two objectives: (1) to preserve these systems and (2) to improve them to predetermined levels.

FAA does not use the NPIAS to set goals for the airport system because, according to agency officials, the agency has little control over the airport development estimates that comprise the NPIAS. FAA officials also questioned the fairness of holding FAA accountable for achieving goals in a program that

the agency does not fully control. They further said that arriving at fair goals might be impossible. We believe, however, that FAA could be overestimating the difficulty of defining goals and underestimating the influence that centrally established goals could have on airport development programs.

With advice from the Congress and other sources, FAA could develop goals for overall aviation system performance, using flight delays as a measure, or individual project categories. For example, FAA might set a goal of keeping total flight delays nationwide from rising. Some hypothetical goals are shown in table 2 for several NPIAS development categories:

Table 2: Hypothetical NPIAS Goals

<u>Category</u>	<u>Hypothetical goal</u>
Safety and security..	90 percent of safety projects should be completed within a prescribed time.
Standards.....	75 percent of airports must meet new lighting standards within 1 year.
Capacity.....	80 percent of new runways proposed should begin construction within 2 years. The federal share of projects to improve capacity at medium hubs will be increased by 50 percent. Over the next 10 years, capacity at medium hubs will increase by 30 percent.
Environment.....	30 percent fewer people will be affected by a given level of aircraft noise within the next 3 years.

For the most part, FAA does have only limited influence over the kinds and locations of airport projects that the AIP program supports. This is because 62 percent of the annual AIP outlay is apportioned as entitlements that airports can use for any eligible purpose. These entitlements are clearly beyond FAA's direct control. However, for the remainder--over one-third of the total outlay--FAA can have some direct influence because of the discretion the agency can exercise in approving either where or what type of project is funded from the set-asides or the discretionary funds. Also, as noted in FAA's Airport Improvement Handbook, an FAA agreement to help fund a project may enable airport officials to obtain more favorable financing from private sources for the remaining funds needed to complete the project.

A NATIONAL PLAN NEEDS A CREDIBLE  
BASE OF PROJECTS

The second element essential to an effective national airport plan is that it be based on a credible set of projects.

However, FAA officials characterized the NPIAS as a "shopping or wish list" of states' and local airports' needs because the underlying projects at many airports, especially those with 20 or fewer based aircraft, would never be funded. They cited two reasons for this. First, although these airports qualify to be included in the NPIAS, meeting their needs would not benefit the system as much as meeting the needs of higher priority projects at other airports vying for the same funds. Second, even if the priority of these airports' projects was high, the airports probably could not obtain matching funds.

One FAA Airports District Manager estimated that 20 of the 65 airports in his state that are routinely part of the NPIAS had never received AIP funding because they simply do not handle a sufficient number of passengers. As an example, he cited a general aviation airport where sixteen aircraft are based and, in his judgment, the eligible development needs include a paved runway, an apron, a taxiway, and land to meet FAA clearance requirements. The District Manager also said that even though the airport does not apply for grant money, he routinely adds these needs to his NPIAS submission because the airport is eligible for AIP assistance.

FAA officials further question the NPIAS' credibility because the document projects development as far as 10 years into the future. The officials believe that 3 years is more realistic. They cite several reasons, including the uncertain availability of local matching funds, the potential for airlines to change their business plans and local governments their development policies, the long time needed to resolve controversial environmental issues, and the potential for change in the requirements imposed on airports by the Congress and FAA. They also said that the NPIAS is required by the Congress for its purposes and serves FAA only as a starting point in making airport improvement grants under the AIP program and in keeping track of airports eligible for these grants.

Instead of the NPIAS, FAA field office officials told us that for planning purposes they use 5-year capital improvement programs (CIP) developed by those airports that expect to receive AIP funding.<sup>1</sup> These officials believe that 5-year CIPs better represent airports' future needs for federal assistance than does the NPIAS. This is because projects in these plans are reviewed by FAA Airport District Offices after the airport applies for grants. District Office officials told us that the review considers a project's impact within the airport, on facilities such as air traffic control, and outside the airport, on elements

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<sup>1</sup>Not all FAA regions require the airports within their boundaries to use CIPs, and the use of CIPs in a region that requires them is not consistent.



such as the environment and ground transportation. As in the past, these reviews will need to be coordinated with plans for other transportation modes.

CIPs further differ from the NPIAS in that FAA officials rank CIP projects in order of priority and the plans themselves contain only 5 years of projects. The priority that FAA assigns to a project is based on several factors, including the project's purpose and the number of passengers enplaned. For example, in line with overall AIP policy statements, safety projects get the highest priority. Once priorities are assigned, officials in FAA's nine regional offices compare projects within their respective regional boundaries for purposes of making funding decisions. Generally, FAA does not compare projects or CIPs across regions, and the NPIAS provides no such comparative mechanism. Thus, if FAA could combine individual airport's CIPs to form a 5-year national airport plan, FAA would have a more credible base of projects and the ability to compare projects nationwide on the basis of their relative priorities.

#### NATIONAL AIRPORT PLANNING NEEDS PERFORMANCE MEASUREMENT

The third and probably most problematic element in effective national airport planning is determining how development activities contribute to achieving goals. This element is closely related to your Committee's 1987 request that FAA develop a system to determine the effect of improvements at each individual airport on the total system. To do this, FAA would need to strengthen both its analytic capability and the data it needs to understand the relationship between investment in airports and the resulting performance of the airport system.

As it exists now, the NPIAS does not seek to ensure that the benefits anticipated from investing in airport infrastructure are being realized in proportion to the size of the investment. As discussed earlier, this is partly because national performance goals have not been established. But it also is because an effective means of measuring airport performance does not exist. For example, when trying to measure the impact of noise mitigation projects, FAA officials say that they cannot distinguish the projects' effects from the effects of FAA's new aircraft noise rules for phasing out the loudest planes by the year 2000. Furthermore, to measure the benefits of capacity-enhancing projects, FAA has neither consistent data nor a dependable model. For example, we found that in justifying a major capacity project--the new Denver airport--FAA could make only rough estimates of the new airport's impact on national flight delays.

Thus, to target Airport and Airway Trust Fund resources to the types of projects that are most likely to meet established

goals, FAA would need to develop feedback mechanisms to indicate whether investment in various project categories or at certain types of airports has paid off as expected. One of the obstacles holding FAA back in this area has been the agency's lack of reliable data on the most common measurement of system performance: flight delays. However, computer upgrades in recent years have improved the agency's ability to collect and process accurate delay data. FAA and Department of Transportation officials say that they plan to make use of the new data to improve their ability to analyze and reduce aviation delays.

Once an adequate feedback mechanism is in place and appropriate reports have been made to the Congress, many options are possible. Decisionmakers could consider options ranging from a major redesign of the AIP program, including the entitlement and set-aside percentages, to more modest changes such as targeting the federal share of funding to specific categories of development.

### CONCLUSIONS

In conclusion, Mr. Chairman, we believe that oversight of the Aviation Trust Fund could be enhanced if decisionmakers knew how various spending decisions would benefit or harm the national aviation system. However, this knowledge currently is not available through FAA's national airport plan. While FAA's supplements to the NPIAS will make it more descriptive, these changes add little to the NPIAS' value as an effective planning tool. We believe that more basic changes are needed, such as establishing goals, making the content of the national airport plan more credible, and developing feedback mechanisms.

If the Committee believes that the airport development plan should include investment options, FAA might find the concepts and principles underlying the Secretary's highway and bridge report helpful. In particular, this report could help FAA to identify the criteria and methodologies for quantifying investment requirements both to preserve the airport system at current service levels and improve the system to meet increased service levels.

At this time, we would be happy to respond to any questions that the Subcommittee might have for us.

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