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THE EFFECT OF THE AIRLINE DEREGULATION ACT ON THE LEVEL OF AIR --ETC(U)
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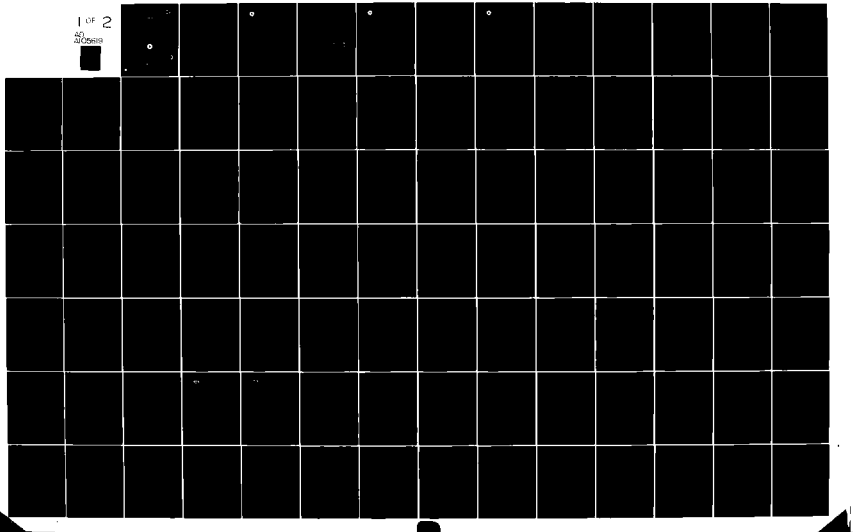

LEVEL III

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THE EFFECT OF THE AIRLINE DEREGULATION ACT ON THE LEVEL OF AIR SAFETY.

Annual Report of the Secretary of Transportation to the United States Congress pursuant to Section 107 of the Airline Deregulation Act of 1978 (P.L. 95-504),

(12) 1981

(11) MAY 1981

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Washington, D.C. 20590

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This report was prepared in response to the requirements of Section 107 of the Airline Deregulation Act of 1978 (P.L. 95-540). It reviews the impact of deregulation on air carrier operations in calendar year 1980, and provides statistical data on accident, incident, and violation records for these carriers.

The statistical data from calendar year 1980 show that there was a significant improvement in the overall safety record for all of the air carrier groups as compared to 1979. The domestic trunk carriers, in terms of fatal accidents, achieved a perfect safety record in 1980. The commuter air carriers, while experiencing continuing growth, also showed a marked improvement in safety. The air taxi operators had fewer accidents in 1980 but had more fatal accidents. The statistical data show that air safety was not adversely affected by deregulation.

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THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

AUG 5 1981

The Honorable George Bush
President of the Senate
Washington, D.C. 20510

Dear Mr. President:

I am pleased to transmit the enclosed report entitled "The Effect of the Airline Deregulation Act on the Level of Air Safety." This report was prepared in response to the requirements of Section 107 of the Airline Deregulation Act of 1978 (P.L. 95-504). It reviews the impact of deregulation on air carrier operations in calendar year 1980, and provides statistical data on accident, incident, and violation records for these carriers.

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This report represents the second transmittal to the Congress responding to Section 107 of the Airline Deregulation Act of 1978. In neither this nor the preceding report has any adverse correlation been established between aviation safety and the deregulated industry environment. Inasmuch as the preparation of this report has required the estimated expenditure of more than 1,000 man-hours of time each year, I recommend that it be discontinued and, accordingly, that the reporting requirements contained in Section 107 of the Deregulation Act be repealed.

I will continue to closely monitor the safety record of the aviation industry and work toward an improvement in that regard. However, in consideration of the Administration's efforts to eliminate unnecessary or questionable resource expenditures and in view of the findings of this and the previous year's report, I see no reason to perpetuate this reporting requirement.

If I can be of any assistance in providing additional information supportive to this recommendation, please let me know.

A copy of this report has also been transmitted to Thomas P. O'Neill, Jr., Speaker of the House of Representatives, and Marvin S. Cohen, Chairman, Civil Aeronautics Board.

Sincerely,

Enclosure

THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

AUG 5 1981

The Honorable Thomas P. O'Neill, Jr.
Speaker of the House of Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

I am pleased to transmit the enclosed report entitled "The Effect of the Airline Deregulation Act on the Level of Air Safety." This report was prepared in response to the requirements of Section 107 of the Airline Deregulation Act of 1978 (P.L. 95-504). It reviews the impact of deregulation on air carrier operations in calendar year 1980, and provides statistical data on accident, incident, and violation records for these carriers.

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Sincerely,

Drew

Enclosure

THE SECRETARY OF TRANSPORTATION

WASHINGTON, D.C. 20590

AUG 5 1981

The Honorable Marvin S. Cohen
Chairman, Civil Aeronautics Board
1825 Connecticut Avenue, NW
Washington, D.C. 20428

Dear Mr. Cohen:

I am pleased to transmit the enclosed report entitled "The Effect of the Airline Deregulation Act on the Level of Air Safety." This report was prepared in response to the requirements of tion 107 of the Airline Deregulation Act of 1978 (P.L. 95-504). It reviews the impact of deregulation on air carrier operations in calendar year 1980, and provides statistical data on accident, incident, and violation records for these carriers.

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Sincerely,

Enclosure

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EXECUTIVE SUMMARY

This report is being submitted to Congress and the Civil Aeronautics Board in response to the requirements of Section 107(b) and (c) of the Airline Deregulation Act of 1978. This section of the Act requires an analysis of the effects of deregulation, in the preceding calendar year, in terms of accidents, incidents, and violations filed, current and anticipated staffing requirements, changes of air carrier operating practices and procedures, and the adequacy of the air safety regulations. Recommendations are also required for the levels of surveillance and levels of staffing necessary to perform this surveillance.

GENERAL IMPACT OF THE ACT (CHAPTER II)

1. Although overall service is up, domestic trunk and local service operators are dropping some less productive routes and cities in favor of longer routes. The net result has been longer stage lengths.

2. Commuter operations, based on flight hours, departures, and number of passengers carried, continue to increase.

3. The restructuring of air service, brought about primarily by the deregulation act, has not adversely affected availability of passenger service.

EFFECT OF THE ACT ON AIR SAFETY (CHAPTER III)

1. There is no evidence that deregulation has caused an increase in the accident rate of the air carriers.

2. There was a significant improvement in overall accident rates for the certificated route carriers in 1980 as compared to 1979.

3. The domestic trunk operators, in terms of passenger fatalities, achieved a perfect safety record in 1980.

4. Among those operators engaged primarily in extensive domestic passenger service in the contiguous United States, the best statistical safety record per flight hour was compiled by the domestic trunk operators, followed by the local service operators, then the commuter operators.

5. The overall safety record for other certificated route carriers was similar to that achieved in 1979.

6. The commuter operators, while continuing to experience growth in terms of flight hours, showed a marked reduction in the number of fatal accidents, fatalities, and corresponding rates in 1980 as compared to 1979.

7. 1980 accident statistics for other air carrier operators were similar to those in 1979.

EFFECT OF THE ACT ON AIR CARRIER OPERATING PROCEDURES AND AIR SAFETY REGULATIONS (CHAPTER IV)

1. No significant changes or proposals for changes in operating practices or procedures were submitted by the air carriers as a result of the implementation of deregulation in calendar year 1980.

2. Based on the operational experience thus far, the FAA has not identified a need to require significant changes to air carrier operating practices and procedures as a result of deregulation.

3. The FAA is processing some proposals for change to the air safety regulations as a result of deregulation; however, the operational experience of the industry in the deregulated environment is not yet sufficient to identify areas where further regulatory change may be necessary.

RECOMMENDATIONS FOR LEVELS OF SURVEILLANCE AND STAFFING (CHAPTER V)

1. The FAA surveillance program for commuter and air taxi operators should be continued, with special emphasis on the smaller commuters.

2. The FAA policies for national application of the ongoing air carrier surveillance program, as prescribed in FAA Order 1800.12D, should be continued for all other operators with special emphasis on the new local service operators and other operators, which are expanding under the new economic options.

3. The present inspector work force is adequate to perform the work functions expected to be associated with deregulation through FY 81 and FY 82.

4. The 217 positions assigned to the FAA regions and field office security programs are sufficient to accommodate any increase in workload resulting from commuters adopting standard security programs through FY 81 and 82.

CHAPTER I

THE REPORT

A. PURPOSE

This report is being submitted to Congress and the Civil Aeronautics Board in response to Section 107(b) and 107(c) of the Airline Deregulation Act of 1978 (P.L. 95-504) to meet the Act's requirement for Calendar Year 1980. These sections require the submission of an annual report on the extent to which implementation of the Act has affected the level of air safety in the preceding calendar year and the submission of recommendations for levels of surveillance and staffing for the following year.

B. ANALYSIS REQUIRED

1. The Act requires that this report contain, at a minimum, an analysis of:

   a. All relevant data on accidents and incidents occurring in the preceding calendar year in air transportation and on violations of safety regulations issued by the Secretary of Transportation in that year (107(b)(1)).

      This analysis is provided in Chapter III.

   b. Current and anticipated personnel requirements of the Administrator of the Federal Aviation Administration with respect to enforcement of air safety regulations (107(b)(2)).

      This analysis is provided in Chapter V.

   c. Effects on current levels of air safety of changes or proposals for changes in air carrier operating practices and procedures which occurred during the calendar year covered by this report (107(b)(3)).

      This analysis is contained in Chapter IV.

   d. The adequacy of air safety regulations, taking into consideration changes in air carrier operating practices and procedures which occurred during the calendar year covered by the report (107(b)(4)).

      This analysis is also contained in Chapter IV.

2. Section 107(c) of the Act also requires, on an annual basis, recommendations with respect to the:

   a. Level of surveillance necessary to enforce air safety regulations (107(c)).

   b. Level of staffing necessary to carry out such surveillance (107(c)).

   These recommendations are included in Chapter V.

C. ASSUMPTIONS MADE IN THIS REPORT

The following assumptions were made in order to provide a basis for the statistical comparisons and findings contained in this report:

1. The level of air safety attained in calendar year 1978, the year the Act became law, is used as the standard for comparison and evaluation of 1979 and 1980 safety statistics. Section 107(a) of the Act states that the Congress intends that the implementation of the Act result in no diminution of the high standard of safety in air transportation attained in the United States at the TIME OF ENACTMENT of the Act.

2. Any adverse effects of deregulation would first appear among the air carriers engaged in extensive passenger service in the contiguous United States. The carriers which fall in this criteria are the domestic trunk, local service, and commuter operators. These operators have the most opportunities, i.e., markets, resources, etc., to expand under the new economic options provided by the Act.

3. If an air carrier had increases in flight hours and other operational data greater than the rates experienced by the industry in recent years, these increases were a direct result of deregulation.

4. Adverse effects of this expansion could show up anywhere in a carrier's system. Based on this assumption, all statistical data for occurrences on these carriers' international routes are also included in the statistical analysis.

5. The primary consideration of the Act's policy regarding air safety is the maintenance of a high level of safety for the traveling public. Based on this assumption, and because the overwhelming majority of passengers are carried by the domestic trunk, local service, and commuter operators, special emphasis is not given to the other types of operators, i.e., all-cargo, charter, etc.; however, their accident records are reviewed in this report.

D. ASSOCIATED GOVERNMENT AGENCIES

The Governmental agencies referenced in this report and their responsibilities with respect to air safety are:

1. Department of Transportation (DOT) - An executive department of the U.S. Government established by the Department of Transportation Act of 1966 (80 stat. 931) for the purpose of developing national transportation policies and programs conducive to the provision of fast, SAFE, efficient and convenient transportation of the lowest cost consistent therewith.

2. Federal Aviation Administration (FAA) - A part of the Department of Transportation; the FAA is charged with: REGULATING AIR COMMERCE TO PROMOTE ITS SAFETY AND DEVELOPMENT; achieving the efficient use of the navigable airspace of the United States; promoting, encouraging, and developing civil aviation; developing and operating a common system of air traffic control and air navigation for both civilian and military aircraft; and promoting the development of a national system of airports.

3. Civil Aeronautics Board (CAB) - An independent U.S. Government agency established under the Civil Aeronautics Act of 1938 (52 stat. 973) which has broad responsibility for the encouragement and development of an air transportation system properly adapted to the present and future needs of the foreign and domestic commerce of the United States, of the Postal Service, and National defense. It is vested with ECONOMIC REGULATORY POWERS over civil aviation within the United States, and between the United States and foreign countries. Among its powers, the Board issues certificates of public convenience and necessity to air carriers and has jurisdiction over the tariffs for air transportation.

4. National Transportation Safety Board (NTSB) - An autonomous agency, established as such in 1975 by the Independent Safety Board Act. The Board seeks to promote transportation safety by conducting independent accident investigations and MAKING SAFETY IMPROVEMENT RECOMMENDATIONS to government agencies, the transportation industry, and others on safety measures and practices.

E. DEFINITIONS OF TERMS

For the purpose of this report, the following definitions will apply:

1. Operator - A person holding a certificate authorizing the transportation of passengers and/or cargo for compensation or hire.

2. Air Carrier (Airline) - Any person who undertakes, whether directly or indirectly, or by a lease or any other arrangement, to engage in air transportation. (Air transportation is defined as interstate common carriage of persons and/or property.)

3. Certificated Route Air Carriers - A group of air carriers holding certificates of public convenience and necessity issued by the CAB authorizing the performance of scheduled air transportation over specified routes and a limited amount of nonscheduled operations. Certificated route air carriers are often referred to as "scheduled carriers" even though they also perform nonscheduled services. For purposes of this report, this group of air carriers includes Domestic/Trunk, Local Service, International/Territorial, and Helicopter operators. (See Appendix 1 for listing of carriers).

4. Trunk Air Carriers - A class of certificated route air carriers holding original certification under the Civil Aeronautics Act of 1938 and whose primary operations are in domestic scheduled passenger service between medium and large air traffic hubs. Although Pan American is included as a trunk air carrier in CAB statistical data, it is not included as a trunk in the statistical tables in this report because its routes are primarily international and its present stage lengths are double those of the other trunks.

5. Local Service Air Carrier - A class of certificated route air carriers originally established in the late 1940's to foster and provide air service to small and medium communities on relatively low density routes to large air traffic hubs.

6. International and Territorial Air Carrier - Certificated route air carriers which conduct primarily international and territorial operations.

7. Alaska and Hawaii Air Carriers - Certificated route air carriers conducting operations primarily within the States of Alaska or Hawaii.

8. Helicopter Air Carriers - Certificated domestic route air carriers employing helicopter aircraft for their primary operations. New York Airways, which was the only carrier in this category, terminated operations in 1979.

9. Air Taxi - A class of air carriers, operating pursuant to CAB Part 298, engaged in air transportation of persons, property, or mail for compensation or hire in small aircraft. Part 298 defines "small aircraft" as those with passenger capacities of 60 or less and payload capacities of 18,000 pounds or less. They do not hold certificates of public convenience and necessity and do not hold specific route authority.

10. Commuter Air Carrier - An air taxi operator which (1) performs at least five round trips per week between two or more points and publishes flight schedules which specify the times, days of the week and places between which they are performed, or (2) transports mail by air under a contract or contracts with the United States Postal service when the total amount of the contract or contracts is estimated at the beginning of any reporting period (January 1 and July 1) to be in excess of $20,000 over the next 12 months.

11. Scheduled All Cargo Air Carrier - A class of certificated air carriers holding Certificates of Public Convenience and Necessity, authorizing the performance of scheduled air freight, express and mail transportation over specified routes, as well as the conduct of nonscheduled operations which may include passenger operations.

12. All Cargo Air Service (418 Operator) - A person who holds an all-cargo certificate issued under Section 418 of the Federal Aviation Act for the carriage of only property as a common carrier for compensation or hire between places in any state of the United States, Puerto Rico, or the Virgin Islands in large aircraft. The primary difference between the 418 operator and the Scheduled All-Cargo air carrier is the 418 operator does not hold certificated route authority and, therefore, does not have route protection from the CAB.

13. Charter (Supplemental) Air Carrier - An air carrier holding a certificate authorizing it to conduct charter flights. As a result of the Airline Deregulation Act, some of these operators, with CAB authorization, have instituted limited scheduled services.

14. Commercial Operator - A person who, for compensation or hire, engages in carriage of passengers and/or property without CAB economic authority. Such persons may operate as a common carrier (publically advertise its services for hire) intrastate or as a private carrier (for selected customers on contract basis) interstate.

F. SOURCES OF DATA

1. Flight Hour Information - Flight hours for the Domestic Trunk, Local Service, Alaska-Hawaii, International Territorial, Helicopter, Supplemental, Commercial, Supplemental All Cargo, and Cargo (418) operators were taken from operator reports forwarded to the FAA. The number of flight hours used in the Statistical Tables for the Domestic Trunk and Local Service operators are different from those shown in Table 2-1. This difference is due to the number of operators assigned to these groups. For purposes of this report, the number of operators assigned to these 2 groups and all other groups are taken from the Aircraft Utilization and Propulsion Reliability Report (RIS FS 8302.17).

   Calendar Year 1978 and 1979 flight hour information for the Commuter Air Carriers was taken from data supplied by the CAB. Flight hour data for 1980 was supplied by the FAA Regions.

   Flight hour information for the Air Taxi Operators is based on FAA estimates.

2. Schedule Information - The comparison of flight hours, departures, miles flown, stage lengths, and number of passengers, as shown in Table 2-1, was taken from CAB data.

3. Accident Information - 1978 and 1979 accident information for commuter air carriers was taken from NTSB data. All other accident information was based on preliminary FAA data.

4. Incident and Violation Information - The number of incidents and violations filed were reported by the FAA Regions. The incident and violation data for 1978 were not subdivided by class of operator and are not included for comparison. For similar reasons, incident and violation information for Air Taxi operators is excluded.

CHAPTER II

CHANGES TO THE AIR CARRIER OPERATING ENVIRONMENT

The Airline Deregulation Act gives air carriers certain operational and economic options that were heretofore selectively controlled by the Civil Aeronautics Board. This chapter reviews the safety considerations, and selected statistical data to assess the general impact of the Act on the air carrier industry thus far and provides a background for objective analysis of the accident, incident, and violations filed in Chapter III.

A. SUMMARY

1. Although overall service is up, domestic trunk and local service operators are dropping some less productive routes and cities in favor of longer routes and increased frequencies between the more productive cities. The net result has been longer stage lengths.

2. Commuter airline operations based on flight hours, flights scheduled, and passengers carried continue to increase.

B. OPERATIONAL & ECONOMIC OPTIONS

When considering the new operational and economic options presented in this section, one should be aware that these options have not, in any way, lessened the air carriers' responsibility to meet the requirements of the air safety regulations. There were no reductions in the minimum standards of these regulations as a result of deregulation.

The Act generally increases the freedom of air carriers to acquire new routes, terminate existing routes, and set fares. It provides for gradual decontrol of domestic routes between October 1978 and January 1982. It also provides for the deregulation of domestic fares by 1983.

During the period prior to 1982, carriers are permitted to acquire new routes by any of three methods. First, the Act permits an airline to claim a route previously authorized to another airline but not currently operated by it. This is the "dormant route" authority. Second, the "automatic market entry" provision of the Act permits an airline to claim one new route each year for 3 years, even though that route is not dormant. (An airline may protect one market per year from entry by a competitor). Third, the Act grants expanded authority to the CAB to authorize new routes with a minimum of procedural delay and with a minimum of opportunity for other airlines to resist or refute the need for more competition. Collectively, these provisions of the Act have made new airline routes easier to obtain.

C. AIR SERVICE

A restructuring of the air service in the United States is continuing to occur. Carriers are increasing their stage lengths by dropping the shorter routes and replacing less efficient aircraft. Those operators which operate aircraft better suited for short stage lengths continue to provide increased service to the smaller passenger markets. There has been no evidence that this restructuring of route systems has had any adverse effect on availability of passenger service.

The safety record achieved by the air carriers since deregulation gives no indication that elimination of CAB control of routes and fares as prescribed in the Act, will have an adverse effect on air safety.

D. DOMESTIC TRUNK AIR OPERATORS

According to CAB operational data, overall service by this group of operators decreased in calendar year 1980. The most dramatic decrease involved the number of departures flown (7.3 percent) (Table 2-1).

Notwithstanding the overall decrease in service, these operators continued to take advantage of the new operational and economic opportunities available under the Airline Deregulation Act. In calendar year 1980, as in calendar year 1979, these operators are realigning their route systems in favor of longer routes, as indicated by the increase in stage lengths (distance between takeoff and landing - See Table 2-1).

E. LOCAL SERVICE OPERATORS

Based on the original 6 operators, as tabulated by the CAB, these operators showed a 4.1 percent increase in flight hours in Calendar Year 1980. This increase compares closely with the average increase experienced prior to deregulation. These operators, as in the case of the Domestic Trunk carriers, are realigning their route system in favor of longer stage lengths (Table 2-1).

F. COMMUTER AIR CARRIERS

This group of carriers continues to provide service to a greater share of the airline passenger market as indicated by the continued increase in passengers carried (Table 2-1). A direct comparison of flight hours between calendar Year 1979 and 1980 cannot be made since the 1980 data is based on fiscal year information. However, information obtained from the FAA field offices indicates that overall service of these carriers continues to increase.

G. AIR TAXI OPERATORS

This group of operators, in terms of number of operators, is constantly changing. In 1978 there were 4,220 operators. In 1979 there were 3,535. In 1980, there were 3,623 operators or a net gain of 88 operators. Flight hours for 1980, however, decreased by 6 percent as compared to 1979.

TABLE: 2-1

CHANGES IN AIR CARRIER OPERATING ENVIRONMENT (1)

SCHEDULED OPERATIONS

	FLIGHT YEAR	FLIGHT HOURS	% CHANGE(5)	DEPARTURES	% CHANGE	MILES FLOWN (000)	% CHANGE	STAGE LENGTH	% CHANGE	TOTAL PASS. 000	% CHANGE
DOMESTIC TRUNK(2)	1978	4164775	-	2993188	-	1792518	-	605	-	196073	-
	1979	4377706	+5.1	2980341	-.4	1875031	+4.6	640	+5.8	211554	+7.9
	1980	4266522	-2.5	2761452	-7.3	1860318	-.8	677	+5.8	190404	-10.0
LOCAL SERVICE(3)	1978	995989	-	1472772	-	319467	-	218	-	48612	-
	1979	1050883	+5.5	1400213	-4.9	359547	+12.5	258	+18.3	51629	+6.2
	1980	1093524	+4.1	1389114	-.8	391096	+8.8	283	+9.7	51490	-.3
COMMUTERS(4)	1978	1026315	-	1741994	-	167609	-	96	-	10074	-
	1979	1108052	+8.0	1828942	+5.0	184011	+9.8	101	+5.2	11054	+9.7
	1980	1134236	+2.4	1798345	-1.7	187253	+1.8	104	+3.0	11322	+2.4

(1) Data Source: CAB

(2) Based on 11 carriers including Pan American Airlines (See Appendix 1 for listing of carriers).

(3) Based on 6 carriers but includes data for North Central and Southern which merged as Republic and Hughes Air West which also merged with Republic (See Appendix 1 for listing of carriers).

(4) 1980 data represents data from October 1, 1979 thru September 30, 1980 - 1980 Calendar year data not available

(5) Percentages rounded off to nearest tenth.

H. AVIATION SECURITY

The U.S. Civil Aviation Security Program involves approximately 100 operators that screen passengers. Of these 100, 44 are required by regulation to screen. The remainder (56) screen all or some of their passengers based upon their own choosing. Flexibility is provided these operators by the issuance of operations specifications, developed for them by FAA on an individual basis. Once implemented, the specifications are mandatory and enforceable just as any other regulation. Operators implementing security measures in this manner benefit from the security provided their aircraft and their operation; in addition, their passengers benefit from added security plus their transfer to connecting flights is facilitated since these passengers may be off loaded into sterile areas at their connecting airport.

While commuter carriers could implement passenger screening before the Airline Deregulation Act (ADA-78) became effective, implementation of ADA-78 placed specific requirements on FAA to assure that the level of safety provided passengers traveling by commuter carriers is, to the maximum extent possible, equivalent to that provided by CAB certificated carriers. In an effort to follow through with this mandate, FAA undertook rulemaking action proposing to require 100 percent screening for commuter aircraft seating 20 or more passengers (NPRM 79-17). Also, complexity of screening was attached to the complexity of the airplane instead of the economic authority attached to the operators certificate issued by the Civil Aeronautics Board (CAB).

Approximately 320 public comments were received. Analysis of the comments indicated objection to the proposal based upon cost estimates as measured against the threat against commuter operations. A detailed economic impact study was initiated and completed. Analysis of the study indicated that earlier FAA estimated costs provided in Notice 79-17 were generally accurate when considered against total enplanements. However, when viewed for a particular airport or for a particular flight, costs sometimes appeared to be unreasonably high, because of limited enplanements at that airport or for that flight. Considerable reduction in the cost impact of the final rule (from an estimated $8.80 million operating costs and $5.30 million for airplane operators and $.36 million for airports to no more than $3.15 million operating costs with no capital investment costs involved) has been accomplished through changes in the rule. These changes relate to security requirements based upon seating capacity, with the most stringent requirements imposed upon those airplanes with more than 60 seats. The final rule is expected to become effective during CY 1981.

During this transitional period, several commuters have implemented passenger screening. Some have been short lived, while others have remained in effect since they were first implemented.

CHAPTER III

REVIEW OF ACCIDENT, INCIDENT AND VIOLATION STATISTICAL INFORMATION FOR THE AIR CARRIERS

Section 107 of the Airline Deregulation Act of 1978 requires an analysis of all relevant data on accidents and incidents occurring in the previous calendar year and of the violations of safety regulations issued during that period, to determine the extent to which the implementation of the Act has affected air safety. This chapter reviews the 1980 air carrier data regarding accidents, incidents, and violations with some comparisons to 1979 data. THE EMPHASIS OF THE COMPARATIVE DATA IS FOCUSED PRIMARILY ON THOSE CARRIERS EXTENSIVELY INVOLVED IN SCHEDULED DOMESTIC PASSENGER SERVICE IN THE CONTIGUOUS UNITED STATES, because the available resources and markets provide much more potential for change among these carriers. However, data for other groups of carriers is also presented for overall comparative purposes.

A. SUMMARY

1. There is no evidence that deregulation has caused an increase in the accident rates of the air carriers.

2. There was a significant improvement in overall accident rates for the certificated route carriers in 1980 as compared to 1979.

3. The domestic trunk carriers, in terms of passenger fatalities, achieved a perfect safety record in 1980.

4. Among those carriers engaged primarily in extensive domestic passenger service in the contiguous United States, the best statistical safety record per flight hour was compiled by the trunk air carriers, followed by the local service carriers, then the commuter carriers.

5. The overall safety record for other certificated route carriers was similar to that achieved in 1979.

6. The commuter air carriers, while continuing to experience growth in terms of flight hours, showed a marked improvement in the number of fatal accidents, fatalities, and corresponding rates in 1980 as compared to 1979.

7. The safety record for air taxi operators, in terms of total accidents, improved in 1980, but the number of fatal accidents and fatalities increased.

8. 1980 accident statistics for other air carrier operators were similar to those in 1979.

B. DEFINITIONS

1. Aircraft Accident: An "aircraft accident" is defined by the National Transportation Safety Board (NTSB) as "an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until all such persons have disembarked, and in which any person suffers death or serious injury as a result of being in or upon the aircraft or by direct contact with the aircraft or anything attached thereto, or in which the aircraft receives substantial damage."

2. Aircraft Incident: An "aircraft incident" is defined by the Federal Aviation Administration as "an aircraft occurrence, not classified as an accident, in which a hazard or potential hazard to safety is involved." It is important to note that many of the incidents have no identifiable operational factors involved, but are found in routine maintenance and airworthiness inspections. Most incident information is forwarded by the operator to the FAA for analysis; however, the NTSB does specify 11 types of incidents which must also be reported to them.

3. Violation: For the purpose of this report, a violation is "an official report filed by a FAA Aviation Safety Inspector, which alleges that an operator has failed to comply with one or more requirements of the air safety regulations." The numbers included in the tables associated with this chapter represent all investigation reports filed by field offices. The reports, when processed, include administrative enforcement actions, legal enforcement actions (civil penalty or certificate action), and cases closed without action. The inclusion of all reports filed, rather than just those on which action was taken, was necessary to provide calendar year data because the processing for some reports requires extensive time periods.

C. BASIS FOR COMPARISONS

1. Comparisons will be made in the statistical data using the following numbers and rates:

Total Flying Hours
Number of Accidents
Rate of Accident Occurrence
Number of Fatal Accidents
Rate of Fatal Accident Occurrence
Number of Fatalities in these Accidents
Rate of Fatality Occurrence
Number of Incidents
Rate of Incident Occurrence
Number of Violations Filed
Rate of Violation Occurrence

2. Total Flight Hours:

The total flight hours are the basis for establishing the rate of occurrence of the accident/incident data. The flight-hour totals used in the tables for the certificated route and other air carriers were obtained from reports submitted by the operators to the FAA. 1978 and 1979 flight-hour data for commuter air carriers were taken from data supplied by the CAB. Flight hours for commuters for 1980 and flight hours for air taxi operators for 1978 through 1980 were reported by FAA regions. In cases where the hours for these operators were not readily available, they were estimated by FAA inspectors. All FAA flight-hour information is preliminary.

3. Number of Accidents/Incidents/Violations Filed:

The number of aircraft accidents, fatal accidents, and fatalities, were obtained from the records maintained by the National Transportation Safety Board (NTSB) and FAA. 1980 accident information is based on preliminary accident reports and notifications submitted to the FAA and NTSB. Although these figures have been coordinated with NTSB, they are subject to change. This is particularly true for accidents assigned to the commuter air carriers and to the air taxi operators.

The number of incidents and violations shown in the tables are based on the number of such reports filed by the FAA field offices. The number of incident and violation reports are not subdivided for all groups of carriers by type of operation. Therefore, a comparative assessment of this type of information for all groups of carriers is not included in this report.

4. Rate of Accident/Incident/Violations:

The rates given for aircraft accidents and incidents are per 100,000 flight hours. This rate has historically been one method of calculating aircraft accident rates and provides a basis for comparison with previous years. Other rates, e.g., number of departures, number of revenue passenger miles, etc., were not used because the data base is not complete for all types of carriers.

The rate for violations filed is also calculated per 100,000 flight hours in order to make the comparisons required in this report. Prior to this report, the rate of violations included in published summaries was calculated and reported per 10,000 flight hours.

D. LIMITATIONS OF STATISTICAL DATA

When making statistical comparisons in tables contained in this chapter, one should be aware that accidents, except in isolated cases, are randomly spread among the operators, and their rate of occurrence per operator per given year is not reliably predictable. Thus, the accidents and corresponding rates shown in this report for any group or class of operators should be used as a general indicator and not as an accurate parameter to predict future occurrences.

The number of incidents and violations are not as absolute as the accident information. Many occurrences which fall under the general classification of an incident are dependent on the operator and his personnel making the proper reports. The actual follow through varies among the operators. Violations are dependent on the FAA Aviation Safety Inspector determining that an operator has not complied with air safety regulations. Also, one report may contain a number of violations.

E. ANALYSIS OF STATISTICAL INFORMATION

1. Certificated Route Carriers

The 1980 accident and corresponding rates for this entire group of carriers decreased dramatically as compared to both 1978 and 1979 (Table 3-1). This decrease is significant in that the number of operators in this group increased more than 20% and the number of flight hours increased more than 8% since 1978. During 1980 there was only one fatal accident attributed to this group. That accident, which claimed 13 lives, involved a local service operator. The large number of fatalities shown for calendar year 1979 was the result of only two accidents.

A detailed breakdown of accidents, fatal accidents, fatalities, and rates for each class of operator included in this group for calendar years 1978, 1979, and 1980 are shown in Tables 3-2, 3-3, and 3-4 respectively.

2. Domestic Route Carriers

This class of operator, in terms of passenger fatalities, achieved a perfect safety record in 1980 (Table 3-5). Also, the number of accidents attributed to this group has decreased each year since 1978. The decrease in the number of operators in this group was the result of the merger of National Airlines with Pan American, which is classed as an International Territorial Operator. There was a slight decrease in flight hours in 1980 (4%) as compared to 1979. The number of incidents and violation reports filed for this group of carriers also decreased in 1980 as compared to 1979 (Table 3-6).

The accident, incident, and violation information for this group of carriers shows that there has been a marked improvement in safety since deregulation.

3. Local Service Operator

This group of operators also shows an improvement in its record in 1980 as compared to 1979 (Table 3-7). The single fatal accident occurring in this group involved an Air Wisconsin flight which claimed 13 lives. This accident occurred on June 12, 1980, in Omaha, Nebraska.

The safety record achieved by this group of carriers in 1980 is particularly significant because the number of operators increased from 15 to 25 and the number of flight hours has increased about 30 percent since 1978. There was only a slight decrease in the number of incident and violations filed in 1980 as compared to 1979 (Table 3-8).

This group of operators, as in the case of the domestic trunk operators, has shown an improvement in its safety record since deregulation.

4. Commuter Air Carriers

This group of carriers shows a significant improvement in accident, fatal accident, and fatality rates in 1980 as compared to 1979 (Table 3-9). There has been a dramatic increase in the number of operators and the number of flight hours in this group as compared to 1978. The number of operators has increased by about 12%, but the number of flight hours has increased by over 43%. The number of fatal accidents in 1980 was reduced by 50% even though there was a marked increase in the number of operators and flight hours as compared to 1979. Also, the number of violations filed decreased by over 40% and the number of incidents reported decreased by 36% as compared to 1979 (Table 3-10).

A comparison of the 1980 safety record for commuter operators on basis of flight hour groupings versus accident rates is shown in Table 3-11. Group 1, those operators flying less than 5000 hours, had the highest accident rate, but the lowest fatality rate. Group 2, those operators flying between 5000 and 14999 hours, had the highest fatal accident and fatality rate. Group 3, the larger operators which accummulate more than 15000 hours, achieved the lowest accident and fatal accident rates.

5. Air Taxi Operators

1980 accident statistics for this group of operators show that the total number of accidents decreased substantially as compared to 1979, and particularly if compared to 1978 (Table 3-12). However, the number of fatal accidents and fatalities shows a marked increase over 1979.

A comparison of the 1980 safety record for air taxi operators on the basis of flight hours groupings versus accident rates is shown in Table 3-13. Group 1, those operators flying less than 2,500 hours, had the highest accident and fatal accident rate. Group 2, those operators flying more than 2,500 but less than 7,500 hours, had the lowest fatal accidents and fatality rate. Group 3, those operators flying more than 7,500 hours, had the lowest accident rate but the highest fatality rate.

6. Other Certificated Route Carriers

The other certificated route carriers, which include Supplemental Commercial, Supplemental All Cargo, and Cargo (418) operators suffered one fatal accident in 1980. This accident involved a Supplemental All Cargo operator which claimed one life (Table 3-14). The number of operators in these classes has changed dramatically since deregulation. The number of Commercial operators had decreased by almost 50% (29 to 15), while the Cargo (418) operators have more than doubled (6 to 13) as compared to 1978.

The number of accidents incurred by this group of carriers in 1980 was only slightly higher than 1978 (4 to 3) but significantly less than 1979 (4 to 8). The number of fatal accidents has remained constant for 1978 through 1980 while the passenger fatality rate was similar to that in 1979 but substantially less than that in 1978.

A detailed breakout of the accidents, fatal accidents, fatalities, and corresponding rates for each class of operator in this group for calendar years 1978 through 1980 are shown in Tables 3-15 to 3-17.

7. Summary by Operator Class

An overall accident summary by class of operator for calendar years 1978 through 1980 are tabulated in Tables 3-18 to 3-20. These tables are not intended to be used to compare the overall safety record of one carrier group versus another. Instead, these tables are presented as a means of providing a general summary of accident statistics by calendar year by each class of operator.

F. AVIATION SECURITY

Hijackings are classified as successful, unsuccessful, or incomplete. A successful hijacking occurs when the hijacker controls the flight and reaches his destination or objective. An unsuccessful hijacking occurs when the hijacker attempts to take control of the flight but fails. An incomplete hijacking occurs when the hijacker is apprehended or killed during the hijacking or as a result of "hot pursuit."

The following comparisons of the 1979 and 1980 hijack information is provided.

1. Trunk Air Carrier

During 1979, there were 10 attempts to hijack trunk air carrier aircraft, 3 successful, 2 unsuccessful, and 5 incomplete. In 1980 there were 17 attempts to hijack trunk air carrier aircraft of which 10 were successful, 5 unsuccessful, and 2 incomplete.

2. Local Service Air Carrier

During 1979, there was one successful hijacking of a local service airline. In 1980, there were 4 attempts to hijack local carriers. Three of these were successful and one was incomplete.

3. Commuters

There was no attempt to hijack a commuter during 1979. In 1980, there was one attempt to hijack a commuter airplane. The attempt was stopped by skillful FBI negotiations at the ramp.

4. Analysis of 1980 Successful Hijackings

Of the thirteen successful hijackings, 11 were attributable to disgruntled Cubans who entered the U.S. as a result of the Cuban Refugee Program. The government of Cuba announced on September 16, 1980, that it would adopt drastic penal measures against hijackers or return them to the U.S. for prosecution. On September 17, 1980, another successful hijacking to Cuba occurred. On September 18, 1980, these two hijackers were turned over to U.S. law enforcement officials in Havana. There have been no more successful hijackings to Cuba from the U.S. since that date.

While the FAA cannot determine with certainty how many hijackings it has prevented during 1980, the records indicate 10 incidents have been identified where it apeared individuals may have intended to commit a crime against civil aviation but were prevented from doing so by security procedures. Since the inception of full security measures in 1973 there have been a total of 90 such preventions.

TABLE: 3-1

ACCIDENT STATISTICS - CERTIFICATED ROUTE AIR CARRIERS

1978 - 1980

	1978	1979	1980
NO. OPERATORS	31	35	38
NO. FLIGHT HOURS	6,105,285	6,587,364	6,608,934
NO. ACCIDENTS	22	24	14
ACCIDENT RATE*	0.4	0.4	0.2
NO. FATAL ACCIDENTS	5	5	1
FATAL ACCIDENT RATE	0.1	0.1	.02
NO. FATALITIES	19	350	13
FATALITY RATE	0.3	5.3	0.2

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-2

ACCIDENT STATISTICS BY CLASS OF CERTIFICATED ROUTE AIR CARRIER

CALENDAR YEAR 1978

	DOMESTIC TRUNK	LOCAL SERVICE	ALASKA HAWAII	INT'L TERRITORIAL	HELICOPTER	TOTALS
NO. OF OPERATORS	10	15	6	2	1	31
NO. OF FLIGHT HOURS	4,618,797	1,096,658	59,650	326,322	3,858	6.105.285
NO. OF ACCIDENTS	14	6	1	1	0	22
ACCIDENT RATE*	0.3	0.6	1.7	0.3	-	0.4
NO. OF FATAL ACCIDENTS	4	1	0	0	0	5
FATAL ACCIDENT RATE	0.1	0.1	-	-	-	0.1
NO. OF FATALITIES	16	3	0	0	0	19
FATALITY RATE	0.4	0.3	-	-	-	0.3

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-3

ACCIDENT STATISTICS BY CLASS OF CERTIFICATED ROUTE AIR CARRIER

CALENDAR YEAR 1979

	DOMESTIC TRUNK	LOCAL SERVICE	ALASKA HAWAII	INT'L TERRITORIAL	HELICOPTER	TOTALS
NO. OF OPERATORS	10	18	4	2	1	35
NO. OF FLIGHT HOURS	4,848,948	1,343,143	66,326	327,745	1,202	6587,364
NO. OF ACCIDENTS	11	8	2	2	1	24
ACCIDENT RATE*	0.2	0.6	3.0	0.6	83.2	0.4
NO. OF FATAL ACCIDENTS	2	2	0	0	1	5
FATAL ACCIDENT RATE	0.04	0.2	-	-	83.2	0.1
NO. OF FATALITIES	344	3	0	0	3	350
FATALITY RATE	7.1	0.2	-	-	250.0	5.3

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-4

ACCIDENT STATISTICS BY CLASS OF CERTIFICATED ROUTE AIR CARRIER

CALENDAR YEAR 1980

	DOMESTIC TRUNK	LOCAL SERVICE	ALASKA HAWAII	INT'L TERRITORIAL	HELICOPTER	TOTALS
NO. OF OPERATORS	9	23	4	2	0	38
NO. OF FLIGHT HOURS	4,655,443	1,422,968	68,998	461,525	0	6,608,934
NO. OF ACCIDENTS	8	4	0	3	0	14
ACCIDENT RATE*	0.2	0.3	-	0.7	-	0.2
NO. OF FATAL ACCIDENTS	0	1	0	0	0	1
FATAL ACCIDENT RATE	-	0.1	-	-	-	0.2
NO. OF FATALITIES	0	13	0	0	0	13
FATALITY RATE	-	0.9	-	-	-	0.2

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA-Preliminary

TABLE: 3-5

ACCIDENT STATISTICS - DOMESTIC TRUNK OPERATORS

1978 - 1980

	1978	1979	1980
NO. OF OPERATORS	10	10	9
NO. OF FLIGHT HOURS	4,618,797	4,848,948	4,655,443
NO. OF ACCCIDENTS	14	11	7
ACCIDENT RATE*	0.3	0.2	0.2
NO. OF FATAL ACCIDENTS	4	2	0
FATAL ACCIDENT RATE	0.1	0.04	-
NO. OF FATALITIES	16	344	0
FATALITY RATE	0.4	7.1	-

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-6

VIOLATION/INCIDENT STATISTICS - DOMESTIC TRUNK OPERATORS

1979 - 1980

	1979	1980
NO. OPERATORS	10	9
NO. FLIGHT HOURS	4,848,948	4,655,443
NO. VIOLATIONS FILED	246	224
VIOLATION RATE	5.1	4.8
NO. INCIDENTS REPORTED	411	343
INCIDENT RATE	8.8	7.4

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-7

ACCIDENT STATISTICS - LOCAL SERVICE OPERATORS

1978 - 1980

	1978	1979	1980
NO. OF OPERATORS	15	18	23
NO. OF FLIGHT HOURS	1,096,658	1,343,143	1,422,968
NO. OF ACCIDENTS	6	8	4
ACCIDENT RATE*	0.6	0.6	0.3
NO. OF FATAL ACCIDENTS	1	2	1
FATAL ACCIDENT RATE	0.1	0. 2	0.1
NO. OF FATALITIES	3	3	13
FATALITY RATE	0.3	0.2	0.9

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-8

VIOLATION/INCIDENT STATISTICS - LOCAL SERVICE OPERATORS

1979 - 1980

	1979	1980
NO. OPERATORS	18	23
NO. FLIGHT HOURS	1,343,143	1,422,968
NO. VIOLATIONS FILED	152	146
VIOLATION RATE	11.3	10.3
NO. INCIDENT REPORTS	268	236
INCIDENT RATE	20.0	16.6

*RATES PER 100,000 HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-9

ACCIDENT STATISTICS - COMMUTER AIR CARRIERS
PASSENGER SERVICE
1978 - 1979

	1978 (1)	1979 (1)	1980 (2)
NO. OF OPERATORS	208	227	232
NO. FLIGHT HOURS	1,026,315	1,108,052	1,469,438
NO. ACCIDENTS	32	32	32
ACCIDENT RATE*	3.1	2.9	2.2
NO. FATAL ACCIDENTS	9	10	5
FATAL ACCIDENT RATE	0.9	0.9	0.3
NO. FATALITIES	42	59	21
FATALITY RATE	4.1	5.3	1.4

(1) DATA SOURCE: CAB/NTSB
(2) DATA SOURCE: FAA - Preliminary

*RATES PER 100,000 FLIGHT HOURS

TABLE: 3-10

VIOLATION/INCIDENT STATISTICS - COMMUTER AIR CARRIERS
PASSENGER SERVICE
1979 - 1980

	1979	1980
NO. OPERATORS	227	232
NO. FLIGHT HOURS	1,108,052	1,469,438
NO. VIOLATIONS FILED	411	237
VIOLATION RATE	37.1	16.1
NO. INCIDENTS REPORTED	239	153
INCIDENT RATE	21.6	10.4

*RATES PER 100,000 HOURS

TABLE: 3-11

COMPARISON OF SAFETY RECORD OF COMMUTER AIR CARRIERS

BY FLIGHT HOURS
PASSENGER SERVICE
1980

	GROUP 1	GROUP 2	GROUP 3	TOTALS
NO. OF OPERATORS	166	41	25	232
FLIGHT HOURS	326,347	354,352	788,738	1,469,438
NO. ACCIDENTS	11	9	12	32
ACCIDENT RATE	3.4	2.5	1.5	2.2
NO. FATAL ACCIDENTS	1	3	1	5
FATAL ACCIDENT RATE	0.3	0.8	0.1	0.3
NO. FATALITIES	3	10	8	21
FATALITY RATE	0.9	2.8	1.0	1.4

*RATES PER 100,000 HOURS

DATA SOURCE: FAA - Preliminary

GROUP 1 - 0 - 4999 Hours
GROUP 2 - 5000 - 14999 Hours
GROUP 3 - Over 5000 Hours

TABLE: 3-12

ACCIDENT STATISTICS - AIR TAXI OPERATORS

1978 - 1980

	1978	1979	1980
NO. OPERATORS	4,220	3,535	3,623
NO. FLIGHT HOURS (1)	3,945,480	3,898,573	3,672,930
NO. ACCIDENTS (2)	217	153	136
ACCIDENT RATE *	5.5	3.9	3.7
NO. FATAL ACCIDENTS	57	24	37
FATAL ACCIDENT RATE	1.4	.6	1.0
NO. FATALITIES	160	70	100
FATALITY RATE	4.1	1.8	2.7

(1) ALL FLIGHT HOURS ESTIMATED
(2) 1978, 1979, ACCIDENT DATA - NTSB; 1980 ACCIDENT DATA - FAA (Preliminary)
*RATES PER 100,000 HOURS

TABLE: 3-13

COMPARISON OF SAFETY RECORD OF AIR TAXI OPERATORS

BY FLIGHT HOURS

1980

	GROUP 1	GROUP 2	GROUP 3	TOTALS
NO. OPERATORS	3,343	233	47	3,623
NO. FLIGHT HOURS	1,649,870	952,404	1,070,656	3,672,930
NO. ACCIDENTS	77	38	21	136
ACCIDENT RATES *	4.7	4.0	2.0	3.7
NO. FATAL ACCIDENTS	16	8	10	37
FATAL ACCIDENT RATE	1.0	0.8	.9	1.0
NO. FATALITIES	45	21	30	100
FATALITY RATE	2.7	2.2	2.8	2.7

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

GROUP 1 0 - 2499 Hours
GROUP 2 2500 - 7499 Hours
GROUP 3 Over 7500 Hours

TABLE: 3-14

ACCIDENT STATISTICS - OTHER AIR CARRIER OPERATORS

1978 - 1980

	1978	1979	1980
NO. OF OPERATORS	45	47	47
NO. FLIGHT HOURS	664,562	556,998	527,057
NO. OF ACCIDENTS	3	8	4
ACCIDENT RATE*	0.5	1.4	1.0
NO. FATAL ACCIDENTS	1	1	1
FATAL ACCIDENT RATE	0.2	0.2	0.3
NO. OF FATALITIES	144	3	1
FATALITY RATE	21.7	0.5	0.3

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA Preliminary

TABLE: 3-15

ACCIDENT STATISTICS BY CLASS OF OPERATOR - OTHER AIR CARRIERS

1978

	SUPPLEMENTAL	COMMERCIAL	SUPPLEMENTAL ALL CARGO	CARGO (418)	TOTALS
NO. OF OPERATORS	7	29	3	6	45
NO. FLIGHT HOURS	184,664	275,392	137,638	66,868	664,562
NO. OF ACCIDENTS	2	1	0	0	3
ACCIDENT RATE*	1.1	0.4	-	-	0.5
NO. FATAL ACCIDENTS	0	1	0	0	1
FATAL ACCIDENT RATE	-	0.4	-	-	0.2
NO. OF FATALITIES	0	144	0	0	144
FATALITY RATE	-	52.3	-	-	21.7

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-16

ACCIDENT STATISTICS BY CLASS OF OPERATOR - OTHER AIR CARRIERS

1979

	SUPPLEMENTAL	COMMERCIAL	SUPPLEMENTAL ALL CARGO	CARGO (418)	TOTALS
NO. OF OPERATORS	8	26	4	9	47
NO. FLIGHT HOURS	170,624	129,746	157,760	98,868	556,998
NO. OF ACCIDENTS	2	2	3	1	8
ACCIDENT RATE*	1.2	1.5	1.9	1.0	1.4
NO. FATAL ACCIDENTS	1	0	0	0	1
FATAL ACCIDENT RATE	0.6	-	-	-	0.2
NO. OF FATALITIES	3	0	0	0	3
FATALITY RATE	1.8	-	-	-	0.5

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-17

ACCIDENT STATISTICS BY CLASS OF OPERATOR - OTHER AIR CARRIERS

1980

	SUPPLEMENTAL	COMMERCIAL	SUPPLEMENTAL ALL CARGO	CARGO (418)	TOTALS
NO. OF OPERATORS	15	15	4	13	47
NO. FLIGHT HOURS	237,829	18,228	134,369	136,631	527,057
NO. OF ACCIDENTS	0	0	4	0	4
ACCIDENT RATE*	-	-	0.3	-	1.0
NO. FATAL ACCIDENTS	0	0	1	0	1
FATAL ACCIDENT RATE	-	-	0.7	-	0.3
NO. OF FATALITIES	0	0	1	0	1
FATALITY RATE	-	-	0.7	-	0.3

*RATES PER 100,000 FLIGHT HOURS

DATA SOURCE: FAA - Preliminary

TABLE: 3-18
ACCIDENT SUMMARY BY CLASS OPERATOR
CALENDAR YEAR 1978

CLASS OPERATOR	NO. OPERATORS	FLIGHT HOURS	NO. ACCIDENTS	ACCIDENT RATE*	FATAL ACCIDENTS	FATAL RATE*	NO. FATALITIES	FATALITY RATE *
DOMESTIC TRUNK	10	4618797	14	0.3	4	0.1	16	0.4
LOCAL SERVICE	15	1096658	6	0.6	1	0.1	3	0.3
ALASKA HAWAII	6	59650	1	1.7	0	-	0	-
IN'TL TERRITORIAL	2	326322	1	0.3	0	-	0	-
HELICOPTER	1	3858	0	-	0	-	0	-
COMMUTERS	208	1026315	32	3.1	9	0.9	42	4.1
AIR TAXI	4220	3945480	217	5.5	57	1.4	160	4.1
SUPPLEMENTAL	7	184664	2	1.1	-	-	-	-
COMMERCIAL	29	275392	1	0.4	1	0.4	144	52.3
SUPPLEMENTAL ALL CARGO	3	137638	0	-	0	-	0	-
CARGO (418)	6	66868	0	-	0	-	0	-
TOTALS	4507	11741642	274	2.3	72	0.6	365	3.1

*Rates Per 100,000 Flight Hours
Data Source: FAA Preliminary

TABLE: 3-19
ACCIDENT SUMMARY BY CLASS OPERATOR
CALENDAR YEAR 1979

CLASS OPERATOR	NO. OPERATORS	FLIGHT HOURS	NO. ACCIDENTS	ACCIDENT RATE*	FATAL ACCIDENTS	FATAL RATE *	NO. FATALITIES	FATALITY RATE *
DOMESTIC TRUNK	10	4848948	11	0.2	2	.04	344	7.1
LOCAL SERVICE	18	1343143	8	0.6	2	0.2	3	.2
ALASKA HAWAII	4	66326	2	3.0	0	-	0	-
IN'TL TERRITORIAL	2	327745	2	0.6	0	-	0	-
HELICOPTER	1	1202	1	83.2	1	83.2	3	250.0
COMMUTERS	227	1108052	32	2.9	10	0.9	59	5.3
AIR TAXI	3535	3898573	153	3.9	24	0.6	70	1.8
SUPPLEMENTAL	8	170624	2	1.2	1	0.6	3	1.8
COMMERCIAL	26	129746	2	1.5	0	-	0	-
SUPPLEMENTAL ALL CARGO	4	157760	3	1.9	0	-	0	-
CARGO (418)	9	98868	1	1.0	0	-	0	-
TOTALS	3844	12150987	217	1.8	40	0.3	482	4.0

* Rates Per 100,000 Flight Hours
Data Source: FAA Preliminary

TABLE: 3-20
ACCIDENT SUMMARY BY CLASS OPERATOR
CALENDAR YEAR 1980

CLASS OPERATOR	NO. OPERATORS	FLIGHT HOURS	NO. ACCIDENTS	ACCIDENT RATE*	FATAL ACCIDENTS	FATAL RATE*	NO. FATALITIES	FATALITY RATE *
DOMESTIC TRUNK	9	4655443	8	0.2	-	-	-	-
LOCAL SERVICE	23	1422968	4	0.3	1	0.1	13	0.9
ALASKA HAWAII	4	68998	0	-	0	-	0	-
IN'TL TERRITORIAL	2	461525	3	0.7	0	-	0	-
HELICOPTER	-	-	-	-	-	-	-	-
COMMUTERS	232	1469438	32	2.2	5	0.3	21	1.4
AIR TAXI	3623	3672930	136	3.7	37	1.0	100	2.7
SUPPLEMENTAL	15	237829	0	-	0	-	0	-
COMMERCIAL	15	18228	0	-	0	-	0	-
SUPPLEMENTAL ALL CARGO	4	134369	4	0.3	1	0.7	1	0.7
CARGO (418)	13	136631	0	-	0	-	0	-
TOTALS	3940	12278359	184	1.5	41	0.3	131	1.1

* Rates Per 100,000 Flight Hours
Data Source: FAA Preliminary

CHAPTER IV

ADEQUACY OF AIR SAFETY REGULATIONS

Section 107 of the Act requires an analysis of the effects on current levels of air safety of changes or proposals for changes in air carrier operating practices and procedures which occurred during the calendar year covered by this report and the adequacy of the air safety regulations considering these changes.

A. SUMMARY

1. No significant changes or proposals for changes in operating practices or procedures were submitted by the air carriers as a result of the implementation of deregulation in calendar year 1980.

2. Based on the operational experience thus far, the FAA has not identified a need to require significant changes to air carrier operating practices and procedures as a result of deregulation.

3. The FAA is processing some proposals for change to the air safety regulations as a result of deregulation; however, the operational experience of the industry in the deregulated environment is not yet sufficient to identify areas where further regulatory change may be necessary.

B. CHANGES IN AIR CARRIER OPERATING PRACTICES AND PROCEDURES

Although the Act has been in effect for over 2 years, the air carriers have not requested FAA approval for any significant changes to their procedures which can be attributed to deregulation. The operation and maintenance of aircraft, regardless of the number of aircraft and frequency of operation, is still accomplished in accordance with practices and procedures approved prior to deregulation.

C. CHANGES TO MAINTENANCE PROGRAMS

Increases or decreases in air carrier fleet counts have no significant bearing on the maintenance procedures unless a new type of aircraft is involved. The carrier develops a maintenance program for each fleet (type of aircraft). It includes work forms to control and record accomplishment of the tasks and detailed instructions and specifications for the use of the persons performing the tasks. Development of a maintenance program for a new aircraft is a major undertaking which is normally started years before the first airplane of the new fleet enters service; however, the program is unaffected by addition or deletion of aircraft from an existing fleet.

Since deregulation, the number of aircraft in the air carrier fleet has increased and several new aircraft types have been put into service. These new types, however, were readily absorbed in the maintenance programs because they were typical of previous types. These changes have not required any significant revisions in the maintenance programs.

Changes to fleet size, which could be accelerated in a deregulated industry, will have a direct affect on the work force and maintenance facilities. Small increases of fleet size, on the order of 5 percent, can initially be accommodated by the existing work force and facilities, when followed by an orderly increase in maintenance capability to accommodate the change. Substantial increases demand immediate expansion of maintenance capability, which is usually difficult to accomplish if the change was not anticipated in time to properly prepare for it. When such changes occur, the operator's work force and facilities can be overtaxed with a resultant exposure to improper or inadequate maintenance accomplishment.

FAA surveillance workload is affected accordingly. The predominant thrust of FAA surveillance is toward compliance with the carrier's maintenance program, work force competency and adequacy, and the adequacy of the facilities. Increases in fleet size that do not overtax the carrier's maintenance capability and do not involve new aircraft types do not impose a particular burden on the FAA. Significant increases that the carrier has not prepared for, or that otherwise overtax the carrier's maintenance capability, impose an immediate and critical surveillance workload on the FAA.

D. CHANGES TO OPERATIONAL PROGRAMS

Operational policies and procedures which have a direct impact on air carrier safety are also developed at the carrier's inception and modified through the years with FAA approval as the carrier changes equipment, type of operation, and with the general state-of-the-art in the air carrier industry. The addition of aircraft, pilots, other crewmembers, and support resources does not change the requirement that the carrier must follow these procedures until approval of revised procedures. As with the maintenance programs, the problems associated with unanticipated accelerated growth stem primarily from the carrier's capability to support this growth within its available resources and still follow the procedures.

E. CHANGES TO AIR SAFETY REGULATIONS

There are some preliminary indications resulting from the operational experience in the deregulated environment that some changes to the regulations will be necessary. These areas are being explored for proposed rulemaking. There were two changes to the regulations under which the commuter airlines operate, and one being proposed, which could impact the commuter airlines in calendar year 1981.

1. Amendment to FAR 135

This Part has been amended to require that no one may serve as pilot-in-command of a passenger carrying aircraft operated by a commuter air carrier unless he has logged from 10 to 25 hours of flight time in that make and model aircraft under the supervision of a qualified check pilot. The flight time requirement is keyed to aircraft complexity with the 10-hour minimum applying to relatively simple single engine piston aircraft, ranging upward to 25 hours for high performance turbojets.

In addition, the rule states that the pilot-in-command of a commuter aircraft approved for single pilot operations with the aid of an auto-pilot must have a minimum of 100 hours flight time in that make and model aircraft before carrying passengers.

2. New FAR Part 108

This new Part sets forth security requirements for certain commuters and air taxi operators, and is scheduled to become effective in 1981. It requires operators using airplanes seating 61 passengers or more to use 100 percent screening. Carriers using airplanes seating less than 61 passengers are not required to conduct 100 percent screening unless they desire to deplane passengers into a sterile area at destination airports.

3. Revision to FAR 139

This Part would be revised under a notice of proposed rulemaking to require certification of those airports at which commuter air carriers provide the only commercial passenger service. Action on the notice is being held in abeyance pending congressional clarification on the statutory authority to issue the change.

CHAPTER V

LEVELS OF SURVEILLANCE AND STAFFING

Section 107 of the Airline Deregulation Act requires annual recommendations from the Secretary of Transportation with respect to the level of surveillance necessary to enforce air safety regulations and the level of staffing necessary to carry out this surveillance. It also requires an analysis of the FAA's current and anticipated personnel requirements with respect to enforcement of air safety regulations. This chapter outlines the FAA policies regarding level of surveillance on the air carrier operators, and reviews the current staffing, and the anticipated requirements for 1981.

A. RECOMMENDATIONS FOR 1981 LEVELS OF SURVEILLANCE

1. The FAA surveillance program for commuter air carriers and air taxi operators should be continued, with special emphasis on the smaller commuters.

2. The FAA policies for national application in the ongoing air carrier surveillance program, as prescribed in FAA Order 1800.12D, should be continued for all other air carriers with special emphasis on the new local service operators and other operators which are expanding under the new economic options.

B. RECOMMENDATIONS FOR 1981/1982 STAFFING

1. The present inspector work force is adequate to perform the work functions expected to be associated with deregulation through FY 1981 and FY 1982.

2. The 217 positions currently assigned to FAA regions and field office security programs are sufficient to accomodate any increase in workload resulting from commuters adopting standard security programs through FY 1981 and 1982.

C. NATIONAL AIR CARRIER SURVEILLANCE POLICIES

The FAA Regions are provided with national policies (FAA Order 1800.12D) outlining orders of priority which will normally be observed in programming and accomplishing various field office work programs. This concept allows the regions and field offices to devote their manpower resources where they believe the greatest need exists, within the national priorities. In this regard, the FAA has instituted a mandatory national policy which requires the field offices to apply higher levels of surveillance during the initial period of the commuter airlines expansion and transition to higher operational standards. This was done to ensure field office emphasis during the period of commuter expansion and transition. This policy will be continued through CY 1981 and extends that formally specified in DOT/FAA Notice 8000.198 which was discontinued in December 1, 1980.

D. FLIGHT STANDARDS FIELD REGULATORY STAFFING

The initial workload associated with implementation of Part 135 and the mandatory surveillance programs for commuters has essentially been completed. The completion of these activities will allow the agency to realign its workforce to conduct a balanced surveillance program for all aviation activities. The present field inspector staffing levels are adequate to meet the provision of the Deregulation Act for the FY 1981/1982 time period.

CHAPTER VI

SUMMARY OF FAA SAFETY ACTIVITIES

Anticipating the effect that deregulation would have on the air carrier industry, including the commuter airlines, and to a lesser degree the entire aviation community, the Federal Aviation Administration, in close coordination with the Secretary of Transportation, has taken significant steps to ensure that the level of air safety would not be adversely affected. The purpose of this summary is to identify the most significant steps and some of the other actions taken by the FAA to anticipate and deal with aviation safety issues arising in the era of airline economic deregulation. These actions have been major factors in the continued high level of air safety enjoyed by the American public.

A. COMMUTER SAFETY RULES

The project to update the commuter air carrier safety rules in FAR 135 was initiated in 1973. That project has been recognized as one of the largest, most complex rulemaking actions ever accomplished by the FAA. A Regulatory Review Program was started in September, 1976, proceeding from the notice of rulemaking issuance to final rule promulgation in slightly more than 13 months.

This revised Part 135, which has been in effect since December 1978, imposed more stringent requirements on commuters and took into full account the significance of deregulation. The provisions of these regulations, coupled with the completion of a stepped-up surveillance program, have played a major role in the continued improvement in the commuter air carrier safety record.

B. PROGRAM OF CONTINUED MONITORING OF PART 135 OPERATIONS

On April 25, 1979, the FAA issued DOT/FAA Notice 8000.176 putting in place a comprehensive series of steps calling for increased surveillance and other steps for operations under new Part 135. Spot inspections of all Part 135 operators were included in the program. The objectives were to reduce commuter accidents and increase operator awareness of the stringent new requirements of Part 135.

DOT/FAA Notice 8000.176, which expired on April 1, 1980, was superceded by Notice 8000.198. This Notice was issued on May 30, 1980, to extend the surveillance requirements for Part 135 operators for another year. Subsequent to the expiration date of Notice 8000.198, the major work functions presented in this Notice were incorporated in the Program Guidelines contained in Order 8000.12D (Appendix 2). These guidelines require that surveillance of Part 135 operators be accomplished on a continuing basis.

C. COMMUTER SAFETY SYMPOSIUMS

Another of FAA's innovations in the continuing effort to improve the safety of commuter operations is a program for a series of annual national commuter safety symposiums supplemented by regional symposiums. The purpose of the program is to provide opportunity for a continuing dialogue on safety matters among FAA, commuters, pilots, consumers, the Congress, and all other persons wanting to contribute ideas to the search for improved safety. The first symposium was held in Reston, Virginia, in January 1980. The attendees indicated strong support for this program.

D. SAFETY IMPROVEMENTS AT COMMUTER AIRPORTS

A proposed five-year program was initiated in 1980 for improved facilities at airports which serve commuters or airports that have been designated as providing essential service to small communities. Those designations, made by the Civil Aeronautics Board (CAB), were required by the Airline Deregulation Act to ensure continued air service to small communities abandoned by the large scheduled air carriers.

The proposed facilities would include precision approach aids, such as instrument landing systems or all-weather microwave landing systems and other landing aids, including visual approach slope indicators and runway identifier lights. Additional safety improvements, such as runway and taxiway extensions, are also included in the program.

FAA analysis showed that of the 674 airports in the U.S. (excluding Alaska) which had recorded passenger boardings in 1979, 425 (or 63 percent) already had or were slated to get precision approach systems. These 425 airports handled 88 percent of all commuter airline passengers in the U.S. in 1979 and 99 percent of all commercial airline passengers (commuters and air carriers).

E. STAFFING

The Congress approved 127 additional Flight Standards regulatory positions in the FY 1981 appropriation to accomplish safety activities which were impacted by the diversion of experienced personnel to areas directly affected by deregulation. In anticipation of Congressional approval of this increase, the Administrator of FAA authorized the advance of 50 positions to Flight Standards Field Offices in January 7, 1980. In October 1980, following the enactment of the FAA FY 1981 Appropriation Act, the remaining 77 positions were allocated to Flight Standards Field Offices.

F. AIRCRAFT CERTIFICATION LEAD REGION PROGRAM

The Aircraft Certification Lead Region Program was established and implemented to perform national aircraft certification staff functions which were previously performed in Washington headquarters. The program is designed to attain a greater level of certification effectiveness, national standardization, accountability in the application of airworthiness standards for civil aeronautical products, and timeliness in (1) issuing regulations, policies, procedures and advisory circulars, and (2) resolving precedent-setting certification issues on particular type certification projects. To support the lead region program and to assure continued technical competence in the certification area, the "national resource specialists" program was also established. The resource specialists will be an FAA cadre of professional aerospace specialists, engineering flight test pilots, and manufacturing and airworthiness aviation safety inspectors who have highly specialized knowledge and skills in these technical disciplines.

Lead region responsibilities have been assigned for: (1) Normal, Utility, and Acrobatic Category airplanes; (2) Transport Category airplanes; (3) Normal and Transport Category rotorcraft; (4) Aircraft engines; and (5) Propellers. In addition, the Northwest Region has been designated as certificating region for Transport Category airplanes. A type certification workload/resource study has been initiated to assist in implementing the certificating region concept in the other lead regions.

To date, three national resource specialists have been selected and already have conducted extensive reviews of type certification projects requiring their expertise. These specialists were selected in the areas of Nonmetallic Materials, Fracture Mechanics and Metallurgy, and Loads and Aerolasticity of Rotorcraft.

G. AVIATION SAFETY ANALYSIS SYSTEM

The Transportation Systems Center in Cambridge, Massachusetts, under the direction of the FAA, is continuing the project of designing and planning the implementation of an Aviation Safety Data Analysis System. The results of this project will improve the collection and processing efficiency of aviation safety data through the use of modern office equipment and communications and provide a greater availability of safety data to industry and to FAA's district and regional offices. The new system will be designed to enhance the analysis of current and future regulatory policy and provide improved knowledge of nationwide safety issues and trends by interfacing with the airlines and other industry sources. A proposed implementation plan is scheduled to be completed in the fourth quarter of 1981.

To meet current and immediate future requirements, an air carrier accident data system for all classes of air carrier operators has been developed and implemented to provide current year accident information. The data base is maintained in cooperation with the National Transportation Safety Board and is based on preliminary information sources available in both the FAA and the NTSB. Also a number of modifications have been implemented in other safety data systems such as the Service Difficulty Report (SDR) and the Accident/Incident Data System (AIDS). These modifications have been made to improve the systems' ability in meeting user needs and to assist in identifying potential safety problems. Other data systems are also being updated and expanded to provide safety information such as medical, violation, and human factors.

H. INTERNATIONAL DATA EXCHANGE ON AVIATION SAFETY

In its continuing effort to keep abreast of aviation safety issues, the FAA initiated the establishment of a special study group, composed of aviation representatives from other countries, on the International Data Exchange on Aviation Safety (IDEAS). The purpose of this group is to discuss and review safety information systems being used and to explore the feasibility for the exchange of safety information between the members. Participating countries include: England, Canada, Sweden, West Germany, Australia, France, Japan, Italy, and the Netherlands.

I. FIELD OFFICE MODERNIZATION

The Field Office Modernization Program is another major effort being undertaken by the FAA to improve the efficiency and effectiveness of its Flight Standards and Civil Aviation Security Field Offices through the use of information processors and improved work procedures. This program is the result of two years of planning and testing and has been approved for implementation at all field offices. The first offices are scheduled to be equipped in December 1981, with phased implementation scheduled through July 1984.

J. NEW FEDERAL AVIATION REGULATIONS

On October 9, 1980, FAR Part 125 was issued to regulate certain large general aviation airplanes, those having a seating capacity of 20 or more or maximum payload of 6,000 pounds or more. This new rule governs large airplanes other than those engaged in common carriage and include operators of airplanes by lease and aviation service firms, airplane manufacturers, and those engaged in private (contract) carriage. These amendments are consistent with economic deregulation because they apply a single set of rules to certain large airplanes without distinction based on economic aspects of the operation, except that common carriage is not permitted.

Amendments to FAR Parts 61 and 121 were issued to permit additional flightcrew training in advanced flight training simulators; allow expanded training, checking, and certification of crewmembers in advanced flight training simulators; and encourage operators to upgrade their simulators and perform a higher percentage of training in simulators so that the total scope of flightcrew training is enhanced. The benefits of this rule include substantially improved safety, reduced fuel consumption, and reduced airport congestion.

Amendments to FAR Parts 107, 121, 129, and 135, and a new FAR Part 108 were developed. These amendments revise and consolidate security regulations for scheduled passenger and public charter operations in a new part of the Federal Aviation Regulations and extend those regulations to certain commuter and air taxi operations and small airplane operations conducted by U.S. and foreign air carriers. The consolidation facilitates public access to aviation security regulations. These changes provide an appropriate response to the current threat of criminal violence and air piracy against scheduled and public charter operations of U.S. air carriers, intrastate operators, and foreign air carriers. These amendments and the new FAR Part 108 have been issued and are expected to become effective in mid CY 1981.

A proposed amendment to FAR 139 was developed which includes safety standards for airports at which commuter airlines provide the only commercial passenger service. The proposed rule would require operators of these airports to show that they are properly and adequately equipped to conduct safe operations for the kind of air carrier to be served as a condition of certification. Issuance of the certificate would be based on a thorough FAA investigation and review of the operations at the airport including firefighting and rescue capabilities. This action is believed necessary because of the rapid growth of commuter airlines in recent years, particularly since passage of the Airline Deregulation Act of 1978. Final action on the rule is being held in abeyance pending congressional clarification of the statutory authority to issue the change.

The FAA has terminated its consideration of separate airworthiness standards for new commuter airline aircraft (FAR Part 24), since the FAA was unable to substantiate any substantial benefits from this role.

K. SAFETY IN AIRLINE MERGERS/ACQUISITIONS

During calendar year 1980, the following mergers/acquisitions occurred:

National Airlines merged with Pan American Airlines

Republic Airlines, Inc. acquired Hughes Air West

Great Northern Airlines merged with Alaska Airlines

Seaboard World merged with Flying Tiger Line

The FAA closely monitored each of the mergers/acquisitions to ensure there was no adverse affect on safety.

L. FAA - CAB WORKING RELATIONSHIP

The FAA and CAB signed a letter of agreement in June 1979 establishing procedures and functions for both agencies in meeting the challenges of deregulation. Personnel from the two agencies meet frequently and exchange ideas on subjects of mutual interest. The FAA, upon request by the CAB, participates in CAB fitness evaluations on commuter operators.

M. AVIATION SAFETY REPORTING PROGRAM

The Aviation Safety Reporting Program (ASRP), initiated in April 1975 and later modified in July 1979, encourages the submittal of reports concerning incidents involving violations of the Federal Air Regulations or other occurrences which could represent a potential unsafe condition or hazard. The vast majority of these reports are submitted by pilots and Air Traffic Controllers at a rate of about 100 per week. These reports are submitted to NASA, through contractual agreement with the FAA, where they are reviewed, analyzed, and stored in a computerized data system. At the end of CY-1980, this data system contained more than 26,000 reports. NASA has issued 11 quarterly reports and a total of 690 Alert Bulletins identifying deficiencies and discrepancies in the National Aviation System. The FAA reviews all Alert Bulletins and takes appropriate action as necessary.

N. CONSOLIDATION OF FLIGHT SERVICE STATIONS

A program was initiated to consolidate the existing 317 Flight Service Stations into 61 automated facilities. Competitive contracts have been awarded and a selection of the contractor to produce the required series of interconnected computers to accomplish this effort is expected to be completed in early 1981.

O. AIR TRAFFIC CONTROL COMPUTER SYSTEM

The FAA has initiated a program to replace its present computer systems in its enroute control centers with advanced new equipment. This new equipment will be designed to meet the projected traffic loads of the 1990's and beyond, and will permit the introduction of higher levels of automation in the control of air traffic. During 1981 FAA will continue planning activities related to the replacement program, including assessment of alternatives for extending the life of the present system until the new one is available.

P. NEW TERMINAL CONTROL AREAS

Two new terminal control areas (TCA's) have been established at San Diego, California, and Honolulu, Hawaii, making a total of 23. Three other TCA sites are in the Notice of Proposed Rule Stage. These are located at Tampa, Florida; Phoenix, Arizona; and Fort Lauderdale, Florida. The existing New York TCA is being proposed for expansion.

Q. SATELLITE AIRPORT DEVELOPMENT PROGRAM

Recognizing the system's growth associated with deregulation, particularly at major hubs, the Administrator announced a major new program in August 1979 to upgrade air safety by improving satellite airports in 57 metropolitan areas. The purpose of this program is to relieve congestion and reduce the mix of commercial and noncommercial aircraft at major hub airports by making neighboring satellite fields more attractive to private and business flyers.

This program is ahead of schedule. In November 1980 the agency had already allocated $111.1 million for 178 projects at 118 satellite airports. Of the $111.1 million, $11.3 million was allocated for the installation of Instrument Landing Systems (ILS) at 24 satellite fields. The agency is concentrating on those improvements that can yield the quickest benefits in increasing the capacity and capabilities of satellite airports. In addition to ILS, improvements include visual landing aids and construction aimed at improving runways, taxiways and aircraft parking aprons. Eventually, as many as 236 satellite airports in 75 metropolitan areas could be affected by this program.

R. AIRBORNE COLLISION AVOIDANCE SYSTEMS

The FAA has awarded a contract for the development and testing of 3 prototype airborne collision avoidance systems. These prototype units are scheduled to be delivered in the Spring of 1981. They will be installed on agency and airline aircraft for a year-long test and evaluation program designed to prove the feasibility of this equipment in actual operations.

S. REVISED ENFORCEMENT PROGRAM

On March 16, 1979, the FAA announced and ordered the implementation of a new enforcement program designed to improve aviation safety. Under this program, the FAA:

1. Issued a new enforcement policy order which stated, in part, that: "With the passage of the Airline Deregulation Act of 1978 and its implementation, many new operators will enter the field of commercial aviation and present operators will expand or upgrade their operations. These new activities will require particular vigilance to ensure compliance with the congressional mandate in the Act that the highest degree of safety in air transportation and air commerce be maintained. There must be a high level of surveillance and investigation of these operations to ensure that potential problems be promptly identified and corrected before there is any derogation of safety. Special attention must be given to commuter and air taxi operators falling under the stringent requirements of new Part 135. These statutory changes require that the agency's enforcement policy be reemphasized and redefined."

2. Ordered increased FAA surveillance of commuter air carrier operations to assure compliance with the Federal Aviation Regulations;

3. *Instructed FAA enforcement* personnel to take strict enforcement actions, including the citing of larger civil penalties for serious violations of safety regulations, with emphasis on air carrier violations, especially commuter air carriers;

4. Ordered the drafting and issuance of a new FAA enforcement handbook which would replace four separate compliance and enforcement handbooks, to establish uniform policy and procedural guidance for all agency enforcement personnel;

5. Recommended the enactment of new legislation for amending the Federal Aviation Act to increase the maximum civil penalty from $1,000 to $25,000 for each violation of the Act or the Federal Aviation Regulations and to provide criminal penalties for willful violations; and

6. Ordered extensive modernization expansion, and improvement of the FAA computerized enforcement information system in order that the results of FAA enforcement actions, and their impact on aviation safety, may be better evaluated.

The agency has initiated action to accomplish the objectives of this program. Special emphasis has and will continue to be placed on instituting a strict enforcement program for serious safety violations.

T. EXAMPLES OF ENFORCEMENT

Pursuant to the Administrator's new enforcement program, FAA has taken stringent actions against air carriers involved in serious safety violations. Examples of enforcement actions of this type that were completed in CY 1980 include:

Type Operator	
International/Territorial	$ 52,000 Civil Penalty
Domestic/Trunk	$175,000 in Civil Penalties (7 counts, $25,000 each)
Domestic/Trunk	$ 15,000 Civil Penalty
Air Taxi/Commuter	$ 40,000 Civil Penalty
Air Taxi/Commuter	Certificate Suspension
Air Taxi/Commuter	Certificate Suspension
Air Taxi/Commuter	Certificate Revocation
Air Taxi/Commuter	Certificate Revocation
Air Taxi/Commuter	Emergency Certificate Revocation
Air Taxi/Commuter	Emergency Certificate Revocation

APPENDIX 1 - LISTING OF CARRIERS BY CLASS

Appendix 1 - Listing of Carriers By Class

The following sections list the names of carriers for selected classes of operators as defined by the CAB and the FAA:

1. Domestic/Trunk Carriers (CAB)

    a. American Airlines

    b. Braniff Airways

    c. Continental Airlines

    d. Delta Air Lines

    e. Eastern Air Lines

    f. National Airlines

    g. Northwest Airlines

    h. Pan Am World Airways

    i. Trans World Airlines

    j. United Airlines

    k. Western Airlines

2. Local Service Carriers (CAB)

    a. Frontier Airlines

    b. U.S. Air (Allegheny Airlines)

    c. Ozark Air Lines

    d. Piedmont Aviation

    e. Republic Airlines

    f. Texas International Airlines

3. Domestic/Trunk Carriers (FAA)

a. American Airlines

b. Braniff Airways

c. Continental Airlines

d. Delta Airlines

e. Eastern Airlines

f. Northwest Airlines

g. Trans World Airlines

h. United Airlines

i. Western Airlines

4. Local Service Carriers (FAA)

a. Altair Airlines

b. Air California

c. Air Florida

d. Air Illinois

e. Air Midwest Inc.

f. Air New England

g. Aspen Airways

h. Air Wisconsin

i. Frontier Airlines

j. Golden Gate Airlines

k. Mackey Int'l Airlines

l. Midway Airlines

m. New York Airlines Inc.

n. Ozark Air Lines

o. Piedmont Airlines

p. Pacific SW Airlines

q. Royal American Airways, Inc.

r. Republic Air lines

s. Southwest Airlines

t. Swift Aire Lines Inc.

u. Texas Int'l Airlines

v. USAir, Inc.

w. Wright Airlines

5. International Territorial Carriers (FAA)

   a. Alaska Airlines

   b. Pan Am World Airways

6. Helicopter Carriers (FAA)

   There were no carriers in this class in 1980.

APPENDIX 2 - FAA ORDER 1800.12D
(FLIGHT STANDARDS PROGRAM GUIDELINES)

ORDER

1800.12D

FLIGHT STANDARDS PROGRAM GUIDELINES

September 21, 1977

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Distribution: WRFS-3; CFS-3(FSNFO only); FFS-0(normal) Initiated By: AFS-14

CHANGE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

1800.12D CHG 2

10/28/80

Cancellation Date: 12/1/80

SUBJ: FLIGHT STANDARDS PROGRAM GUIDELINES

PURPOSE. This change provides FY-81 guidance for General Aviation District Office work program emphasis in order to ensure continued compliance with safety standards.

PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
5 thru 8	10/19/79	5	10/19/79
		6	10/28/80
		7 and 8	10/28/80

WALTER S. LUFFSEY
Associate Administrator
for Aviation Standards

Distribution: A-W(FO/WS)-3; A-X(FS)-3;
AFO-500 (20 copies); A-FFS-0 (STD)

Initiated By: AVS-14

CHANGE

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

1800.12D CHG 1

10/19/79
Cancellation Date: Retain

SUBJ: FLIGHT STANDARDS PROGRAM GUIDELINES

PURPOSE. This change provides FY-80 guidance for district office work program emphasis in order to ensure continued compliance with safety standards. The General Aviation and Air carrier Operations and Airworthiness Work Programs emphasis areas have been reprioritized and new emphasis areas added.

PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
5-11 (thru 14)	9/21/77	5-11 (thru 14)	10/19/79
Appendix 1		Appendix 1	
Pages 3-8	9/21/77	Pages 3	9/21/77
		4	10/19/79
		5	9/21/77
		6-8	10/19/79

CHARLES R. FOSTER
Associate Administrator
for Aviation Standards

Distribution: A-W(FO/WS)-3; A-X(FS)-3;
AFO-500 (20 copies); A-FFS-0 (STD)

Initiated By: AVS-14

FOREWORD

With the recent implementation of staffing standards as the means for the Regions' determination of Flight Standards staffing requirements in connection with preparation of the annual Call for Estimates (Call), the Flight Standards Program Guidelines as pertain to Engineering and Manufacturing, Air Carrier and General Aviation programs were concurrently disassociated from annual budget formulation procedures. The Program Guidelines for these programs will now serve solely as general guidance to the regions for development of their regulatory annual work programs. The exception to this is the Aircraft Program which will remain essentially the same and will be handled as before in accordance with previously established practices and procedures continued in this revision.

The Program Guidelines are a living document essential to annual workload formulation for the Flight Standards area. They must be kept continually current with existing FAA policies and apace of advancing aerospace technology and operational and maintenance techniques.

J. A. FERRARESE
Acting Director
Flight Standards Service

TABLE OF CONTENTS

CHAPTER 1. INTRODUCTION

1. PURPOSE. This Order is issued to provide general guidance to Flight Standards field organizational units in the development and executions of their annual work programs.

2. DISTRIBUTION. This order is distributed to all Washington and regional Flight Standards offices to the branch level; to branch level in the Flight Standards National Field Office; and to all Flight Standards field offices.

3. CANCELLATION. Order 1800.12C, Flight Standards Program Guidelines dated September 15, 1970, is cancelled.

4. EXPLANATION OF CHANGES. Major features of this revision are the deletion of work functions and planning norms and the expansion of program emphasis in the regulatory areas.

5. CHANGES TO THIS ORDER. Revisions normally will be issued by means of changes to update selected portions as required. However, revisions requiring expeditious action may be handled by telecon or priority message which will be followed by normal revision procedures. Suggestions for changes are encouraged and may be submitted at any time to the Executive Officer, AFS-10. Flight Standards Service will review the handbook annually and adopted suggestions will be incorporated in a subsequent revision.

6. PROGRAM EMPHASIS.

a. The regulatory program has a direct impact on every aspect of civil aviation from preliminary designs and engineering of the aircraft, through the manufacturing stages, flight test and certification, airmen qualification, to the procedures and methods governing flight operations. Additional important functional assignments are the investigation and reporting of aircraft accidents, incidents and violations.

b. With the foregoing in mind, national program emphasis items, categorized by program areas, have been established and are intended for guidance to district offices in planning their annual work programs. These items are segments of major program areas that have been identified as having a significant effect on quality of services provided to the public. Should it be determined through analysis and/or surveillance that a particular item is not applicable to the district office environment, the district office chief may disregard that item and concentrate on those that are more consistent with existing environmental factors within a given district office.

7. WORK ACCOMPLISHMENT.

a. Air Carrier and General Aviation Programs.

(1) In establishing district office work programs, emphasis will be given to the investigation, inspection and surveillance of existing certificate holders to assure their continued compliance with safety standards. Therefore, the following order of priority will normally be observed in programming and accomplishing district office work programs.

(a) Accident and Incident Investigation

(b) Inspection of existing certificate holders

(c) Surveillance of existing certificate holders

(d) Enforcement

(e) Air Carrier Airmen Certification (cockpit crews)

(f) Flight Instructor Certification

(g) Commercial Pilot Certification

(h) Airmen Certification (Other)

(i) New Operator/Agency Certifications

(2) The above priorities in the order listed will be observed before initiating any new operator/agency certification functions. These priorities are subject to change which, when required, will be transmitted by priority message for expeditious implementation. All field office work programs will require continued assessment and analysis to assure that the results of the assigned priorities reveal the highest achievable level of safety and are not determined by the number of times an item is completed or is compared to a norm or standard.

b. Engineering and Manufacturing Program. In order to execute Flight Standards regulatory programs, field branch and district office chiefs will schedule and coordinate their work programs (approved by the Flight Standards or Aircraft Engineering Division Chief, as appropriate) within the limits of available resources. Priorities will be established for each work function with the function having the greatest import on safety being the highest priority. The chief will assure that the desired level of safety is obtained in his area by accomplishing work activities in such areas as service difficulty reviews, AD issuances and surveillance of ongoing activities prior to initiating any new certification functions. All work programs will require continued assessment and analysis to assure that the results of assigned priorities achieve the highest achievable level of safety.

8.-10. RESERVED.

CHAPTER 2. PROGRAM EMPHASIS

11. GENERAL. The following emphasis items are listed in order of priority by program area in respective program specialties. These items are not permanent and will ordinarily be deleted or revised on an annual basis, as required. Items that may occur between revisions will be transmitted by priority message for immediate implementation and will be included later in the annual revision.

12. ENGINEERING AND MANUFACTURING.

a. Engineering.

(1) Service Difficulty Review and Analysis. An effective service difficulty review program should be conducted to ensure timely action when design defects are involved.

(2) AD Issuance. An awareness of unique operator problems should be reflected in ADs whenever possible, i.e., routine maintenance schedules should be adhered to if safety is not affected.

(3) Type Certificates and Amendments, and Supplemental Type Certificates and Amendments should continue to receive high priority. Assure that all necessary steps are taken in a timely manner to assure noise certification is properly applied to all certification actions.

(4) DER Program. Manage the DER Program to assure compliance with the FARs and ensure that DERs are utilized to the fullest extent practicable.

(5) DOA Program. Assure that intent of DOA Handbook is followed with respect to DOA type certificate activities.

(6) Emphasis should be placed on job efficiency and effectiveness. Personnel should be encouraged to seek better ways to accomplish our mission through procedural changes and/or regulatory changes, if appropriate.

b. Manufacturing.

(1) Service Difficulty Review and Analysis. An effective service difficulty review program should be conducted to ensure timely action when production defects are involved.

(2) AD Issuance. An awareness of unique operator problems should be reflected in ADs whenever possible, i.e., routine maintenance schedule should be adhered to if safety is not affected.

* (3) Issuance of original airworthiness certificates, including surplus military aircraft, experimental aircraft and imported aircraft, and airworthiness approval of products fabricated prior to issuance of a PC, should receive high priority. *

(4) Production Certificates should continue to receive high priority.

(5) DMIR/DOA Program. Manage the DMIR/DOA Programs to assure full compliance with the FARs and ensure that delegations are utilized to the fullest extent practicable.

(6) Establish positive controls to ensure that compliance inspections for PMA and TSO suppliers are conducted in a timely manner.

(7) Emphasis should be placed on job efficiency and effectiveness. Personnel should be encouraged to seek better ways to accomplish our mission through procedural changes and/or regulatory changes, if appropriate.

* 13. GENERAL AVIATION. For FY 1981 planning, the following emphasis items shall be utilized. These items do not constitute the entire district office work program, but emphasize those work programs that must be accomplished. *

a. Airworthiness (Maintenance/Avionics).

* (1) Air Taxis. Continue to emphasize and conduct required surveillance and review of inspection programs of all air taxi certificate holders to ensure continuing compliance. *

(2) Service Difficulty Program. Monitor all Service Difficulty reports to identify items that may indicate pending catastrophic or significant safety trends. Ensure that assigned certificate holders are complying with regulatory reporting requirements and establish an active program for the submission of reports by industry on a voluntary basis.

(3) Large Aircraft. Survey each large aircraft (other than Part 135 and executive operators) at least once each quarter to ensure that aircraft are being maintained under appropriate and adequate inspection programs by qualified persons. This surveillance can best be accomplished while the aircraft are undergoing inspection. Check the procedures being utilized and the adequacy of the program.

(4) Repair Stations. Conduct one formal inspection annually and a minimum of one informal inspection quarterly on the following type repair stations:

(a) Powerplant-rated repair stations that perform engine overhaul, rebuilding, turbine engine module maintenance and inspection that is the prime function of their rating.

(b) Repair stations performing nondestructive testing, especially those stations that are performing nondestructive tests in compliance with airworthiness directives.

(c) Repair stations that are major modification centers performing major aircraft avionics systems and interior installations and modifications.

(5) Aviation Maintenance Technician Schools (AMTS). Conduct two formal inspections annually on AMTS with emphasis placed on compliance with approved curriculum hours to ensure that time-loss items do not cause deficiencies in instructional hours.

(6) Adherence to Approved Data. Review FAA Form 337 to ensure that FAA-approved data was utilized, conformity of the alteration/repair with the data, and the use of acceptable procedures in performance of the work.

b. Operations.

(1) Air Taxis. Refer to paragraph 14.d., Air Carrier, Commuter/Air Taxi Operations, for program guidelines.

(2) Examiner Program. Ensure, through flight test and written test monitoring, regular contact with all examiners, and a demanding examiner selection process, that high standards are maintained.

(3) Air Agencies. Established surveillance and inspection schedules must be maintained to ensure compliance with applicable FAR.

(4) Agricultural Operations. Monitor closely to ensure public safety is not jeopardized. Regular contact with active certificate holders and agricultural industry organizations must be maintained.

(5) Helicopter Operations. Monitor closely all helicopter operations to ensure public safety is not jeopardized.

(6) Executive Operators. Maintain sufficient surveillance and liaison with corporate executive operators to ensure that pilot qualifications and currency requirements are met.

c. Accident Prevention Program.

(1) Accidents/Incidents. Monitor accident/incident report data * and direct accident prevention efforts toward indicated trend areas and identified cause factors.

(2) Counselor Program. Develop and administer a strong and active accident prevention counselor program.

(3) Industry Liaison. Maintain close liaison with aviation organizations, associations, and individuals to identify potential safety problems. Coordinate corrective actions through the chief with other specialties in the district office. *

(4) Environmental Hazards. Investigate all Safety Improvement Reports submitted by the public and initiate appropriate corrective action. Seek out environmental conditions that may be hazardous to flight and initiate action to correct the condition.

(5) Operator Contact. Meet with air taxi operators, flight schools, agricultural operators, and other certificated air agencies to advise and assist them in establishing organizational safety programs.

(6) Preseasonal Refresher. Ensure that aircraft owners and pilots are continually advised of the preventive measures to be taken against operational hazards associated with the approaching season. *

14. AIR CARRIER.

a. Airworthiness (Avionics).

(1) Cockpit Voice Recorder (CVR) Program. Sample quality of recordings for intelligibility recovery.

(2) Reliability Program. Analyze results of component removal rates and confirmed failures.

(3) Ground Proximity. Monitor maintenance programs of GPWS sensors that are critical to the system.

(4) Public Address System Program. Sample quality of public address system intelligibility.

b. Airworthiness (Maintenance).

(1) Maintenance performance. Conduct spot inspections of maintenance operations to ensure compliance with methods, techniques and practices specified by the operators' manuals and with engineering orders concerning modifications and repairs. Monitor the supervision of production and inspection personnel and regard to adequate coverage for proper accomplishment of work and level of inspection participation in relation to assuring proper maintenance accomplishment.

(2) Methods and procedures. Review the operators' methods and procedures for assigning independent inspection of specific phases of maintenance operations and for final area inspections subsequent to substantial maintenance operations.

* (3) Quality control provisions. Review maintenance program changes and engineering orders for adequate quality control provisions.

(4) Airworthiness Directive Compliance. Monitor the current status of applicable airworthiness directives with particular emphasis on the method of recording and complying with repetitive directives.

(5) Continuing Analysis and Surveillance. Monitor the procedures the operator has established for the continuing analysis and surveillance of its inspection and maintenance programs and ensure the system encompasses contract agency activity. *

(6) Maintenance Review Board (MRB) Implementation and Control. Ensure that MRB required inspections are properly scheduled with regard to fleet size, sample size and thresholds. Determine that inspection findings are properly analyzed and credited and the MRB inspection items are identified in a manner conducive to adequate inspection and tracking.

* (7) Reliability Programs. Monitor reliability programs with emphasis on data review and analysis for substantiation of escalations and changes to the programs. *

c. Operations.

(1) Crew Training. Monitor flight and cabin crew training to assure that the contents of the approved training program are being complied with. Determine that training devices and mockups provide for the necessary realism and transfer of learning. Assure that simulators are maintained to the same standards required for original approval.

(2) Cabin Safety. Conduct cabin en route inspections in accordance with current directives to assure the adequacy of flight attendants' training and crew procedures. Determine that emergency/cabin equipment meets the requirements of the regulations.

(3) En Route Inspections. Conduct cockpit en route inspections to ascertain that the overall operational environment (crew procedures, ATC, facilities, airports, runways, etc.) provide for the highest level of safety. Particular emphasis should be focused on adherence to prescribed operational procedures during approach and landing and the decisionmaking process in the cockpit.

(4) Dispatch. Assure that air carriers have the capability to provide for expeditious notification to flights of all potentially hazardous weather conditions particularly low level wind shear, thunderstorm activity and known or forecast areas of clear air turbulence.

* (5) Upgrading Pilots. Conduct en routes with emphasis on proficiency of pilots recently upgraded from second officers to first officers.

d. Commuter/Air Taxi Operations.

(1) Part 135. Monitor Part 135 inspection and surveillance programs of assigned operators to ensure that air taxi operators and commercial operators can conduct operations for which they are authorized by applicable regulations.

(a) Increased Emphasis on Commuter Operations.

1 Proficiency/competency flight checks. Conduct or observe all proficiency/competency flight checks, if resources permit. *

* 2 En route inspections. Conduct en route inspections to ascertain the overall operational environment provides the highest level of safety. Particular attention should be given to the adherence to operational procedures in the areas of required approach callouts and crew management as it pertains to crew concept and resource management.

3 Weight and balance procedures. Monitor weight and balance procedures and computations to determine that the carrier is operating with a satisfactory weight and balance unit ensuring proper loadings for all flights.

4 Monitor flight and ground training programs. Monitor all training programs to assure contents of approved training programs are being complied with. Determine that approved training devices provide necessary realism and transfer of learning. Assure airplane simulators are maintained to proper standards and that required periodic checks are performed. *

15. HAZARDOUS MATERIALS ACTIVITIES (ALL SPECIALTIES). Assure that all persons carrying hazardous materials in air commerce are qualified and comply with the requirements of the regulations and that shippers offering hazardous materials for air transportation comply with the applicable * regulations for that shipment. (Pending reassignment of this function to the Regional Air Transportation Security Divisions). *

16. TRAINING.

a. Technical Training - Flight

(1) Priorities. The increased activity in civil aviation results * in increased needs for trained personnel. Inspectors administering Part 135 proficiency/competency checks shall meet the requirements of Order 8710.4 Chapter 3 and to the highest extent possible have successfully passed a PIC check in that make and model aircraft. In order to allocate limited * resources to meet the most urgent requirements, the following priorities are established:

(a) Initial Qualification Training.

1 Air Carrier Operations Inspectors performing airman certification work functions, General Aviation Operations Inspectors (Executive and Air Taxi Specialists) and Engineering Flight Test Pilots.

2 Other Air Carrier Operations Inspectors.

3 General Aviation Operations Inspectors (includes principal and supervising inspectors).

4 Airspace System Inspection Pilots, Flight Inspection/ Procedures Specialists (including Standards Development Pilots and Regional Flight Inspection and Procedures Staff Pilots).

5 All other Regional and all Washington Headquarters Flight Standards pilots.

6 All other Flight Standards pilot personnel having justifiable need for this training.

7 All other agency pilot personnel having justifiable need for this training.

(b) Recurrent/Refresher Training.

1 Air Carrier Operations Inspectors performing airman certification work functions, General Aviation Operations Inspectors (Executive and Air Taxi Specialists) and Engineering Flight Test Pilots.

2 Other Air Carrier Operations Inspectors.

3 General Aviation Operations Inspectors (include principal and supervising inspectors).

4 Airspace System Inspection Pilots, Flight Inspection/ Procedures Specialists (including Standards Development Pilots and Regional Flight Inspection and Procedures Staff Pilots).

5 All other Regional and all Washington Headquarters Flight Standards pilots.

6 All other Flight Standards pilot personnel having justifiable need for this training.

7 All other agency pilot personnel having justifiable need for this training.

b. Technical Training - Nonflight. Nonflight technical training should emphasize the changes occurring in equipment, techniques and procedures. Emphasis should be placed on the following:

(1) Techniques and procedures applicable to new aircraft and equipment.

(2) Reliability program/condition monitoring.

(3) Familiarity with systems and equipment utilizing computer technology developments and the resulting changes in practices due to the widespread application of microprocessors.

17. - 20. RESERVED.

CHAPTER 3. SITUATION MONITORING

21. GENERAL. The Systemsworthiness Analysis Program (SWAP) has been reoriented to a Situation Monitoring (SM) concept wherein selective special inspections are conducted only on an as-needed basis. This involves the following major changes:

a. Situation Monitoring inspections will no longer be performed on a recurring prescheduled basis as formerly performed by SWAP. Instead inspections will be conducted only when a safety need is identified by the region or there are strong indications of deterioration in an operator's systemsworthiness. The scope of these inspections will be limited to the particular system(s) that is suspect.

b. The Situation Monitoring function will normally apply to domestic, flag, supplementals, air travel clubs, scheduled air taxi and commercial operators, but regions have the latitude to conduct SM inspections on any segment of industry as warranted by safety indicators. Any functions performed by the SM inspecting team will be considered a part of the applicable district office's total work program.

c. Regional Situation Monitoring staffs will consist of a relatively small group of specialists responsible for monitoring safety indicators to determine the need for SM action. The SM staff will provide the nucleus for the ad hoc SM inspection teams and will draw upon the field offices or branches for additional team members as required.

22.-25. RESERVED.

CHAPTER 4. AIRCRAFT PROGRAMS

Work Functions	Planning Norms
26. SUPERVISION AND ADMINISTRATION.	
a. Deploy FAA aircraft.	As required
b. Operate the aircraft rental program.	As required
c. Schedule and dispatch FAA aircraft.	As required
d. Monitor and control the maintenance & support of FAA aircraft.	As required
e. Implement FAA aircraft operational and maintenance safety procedures.	As required
f. Monitor and schedule flight proficiency checks.	As required
g. Participate in the investigation of FAA aircraft accidents & incidents.	As required
h. Devise and implement improved methods and procedures for operation and maintenance of FAA aircraft.	As required
i. Control aircraft flight hour.	As required
j. Monitor and control flight procedures and airspace function; review new flight procedures and requested waivers.	As required
k. Assure proper operation of approved Aircraft Program reporting systems.	As required
27. FLIGHT PROGRAM - AIRCRAFT OPERATIONS.	
a. Accomplish flight inspection	
(1) Evaluation of sites selected for installation of new navaids.	Appendix 1 Page 1
(2) Commissioning flight inspections of newly installed or relocated navaids.	Appendix 1 Page 1, 2
(3) Special flight inspection to confirm facility performance after accident; user reports, maintenance projects, etc.	On demand

Work Functions	Planning Norms
(4) Periodic flight inspections of commissioned navaids to determine that facility performance continues to meet criteria.	Appendix 1 Page 1
(5) Surveillance flight inspection of all VOR/ VORTAC/TACAN SAFI covered facilities in the conterminous U.S. plus Puerto Rico area.	Appendix 1 Page 1
(6) Jet route flight inspection. Initial route establishment, area navigation, direct and substitute airway routes, and/or facility location change.	Initial plus on demand
(7) Systems requirements.	
(a) General assistance to regional programs in support of projects; e.g., ILS automated approach capability, verification of radio altimeter DH on CAT II ILS facilities and communications.	As required
(b) All airspace requirements.	Supplement facility data as required to assure the NAS continues to support all airspace use.
(8) Procedure flight inspection to insure safety and practicability of authorized flight procedures.	
(a) Airways, routes, fixes.	Initially and as required for obstruction verification and for performance data - Appendix 1 Page 2
(b) Instrument approach procedures.	Initially and annually

Work Functions	Planning Norms
(c) Terminal arrival and departure routes (SIDS-IFR departure procedure, STARS) Profile Descents.	As required for obstruction verification and for additional facility performance data - Appendix 1 Page 2
(d) Holding patterns.	-do-
(e) Obstruction evaluations.	As required Appendix 2 Page 2
(9) Other flight activities.	
(a) Crew standardization.	Appendix 1, Page 3
(b) Test flights.	Appendix 1, Page 3
(c) Ferry flights.	Appendix 1, Page 3
(d) Emergency flights.	On demand
(e) Demonstration flights.	As required
(10) Participate in evaluations of existing, and implement new & improved, policies, methods and procedures.	As required
(11) Aircraft maintenance and support (See paragraph 28).	
b. Accomplish logistics flight.	
(1) Transportation of equipment, cargo, and/or passengers (Alaska, Pacific, and ASB).	Appendix 1 Page 3
(2) Aircraft Maintenance and support (See paragraph 28).	
c. Support and accomplish Evaluation, Currency and Transportation flight.	
(1) Air traffic evaluation of the Air Traffic Control System.	Appendix 1 Page 3
(2) Air Traffic Control specialist familiarization flight.	

Work Functions	Planning Norms

(3) Evaluation of airport lighting systems.

(4) Evaluation of new aircraft types.

(5) Evaluation of flight inspection procedures.

(6) Evaluation of ground facilities using the Portable Flight Inspection Package (PFIP).

(7) Evaluation of new equipment in aircraft.

(8) Evaluation of safety procedures.

(9) Evaluation of instrument approach procedures.

(10) Evaluation of airmen written examination test routes.

(11) Airport inspections.

(12) Initial qualification check.

(13) Flight proficiency check.

(14) Currency.

(15) Familiarization in specific aircraft type when necessary to perform job function.

(16) Post-accident flight check.

(17) General aviation operations and maintenance itineraries and activities (GADO only).

(18) Air carrier operations and maintenance itineraries and activities (ACDO only).

(19) VIP transportation (Secretary/Assistant Secretary/ Administrator/Deputy Administrator/Associate and Assistant Administrators/Office, Service, Regional and Center Directors).

(20) Transportation determined to be in best interest of Government.

(21) Special mission authorized by Administrator/ Deputy Administor/Director, Flight Standards Service.

Work Functions	Planning Norms
(22) Emergency missions, SAR, national or local disaster.	
(23) Reimbursable missions for other agencies.	
(24) Aircraft maintenance & support (See paragraph 28).	
d. Support and accomplish flight training.	
(1) Initial qualification, recurrent/ refresher, and familiarization training.	In accordance with standards established in Flight Standards Pilot Training Order 3000.17
(2) Aircraft maintenance & support (See paragraph 28).	
e. Support and accomplish Research and Development flight program.	
(1) Flight involving detection, gathering and measurement of data in accomplishment of R&D projects, on an infrequent, as-needed basis.	As agreed upon with R&D in each instance
(2) R&D task modification installation, maintenance and removal.	In accordance with program information provided by R&D
(3) Aircraft maintenance & support (See paragraph 28).	
28. FLIGHT PROGRAM - AIRCRAFT MAINTENANCE & SUPPORT.	
a. Perform scheduled and unscheduled maintenance.	In accordance with FAA General Maintenance manuals and Appendix 1
b. Perform maintenance and calibration of flight inspection equipment.	Concurrent with aircraft inspection
c. Operate maintenance analysis program reporting system for FAA aircraft.	As required
d. Perform modifications per technical issuance engineering order.	As required

Work Functions	Planning Norms
e. Accomplish scheduled and unscheduled engine changes.	As required
f. Perform surveillance of contract maintenance.	As required
g. Perform quality control and inspection functions.	As required
h. Maintain survival and safety equipment.	As required
i. Implement training programs.	As required
j. Maintain hangar, line, and shop equipment.	As required
k. Provide flight line servicing of aircraft.	As required
l. Maintain a supply support system.	As required
m. Implement accident prevention and safety programs.	As required
n. Implement operations instructions and checklists.	As required
o. Perform task modifications installation, maintenance & removal associated with the R&D Program.	As required
29. FLIGHT PROCEDURES AND AIRSPACE PROGRAM.	
a. Plan, formulate and maintain surveillance of standard instrument approach procedures.	As required
b. Plan, formulate and maintain surveillance of en route flight procedures.	As required
c. Participate in airspace planning, obstruction evaluation, airport development and in the establishment of en route and terminal navaids.	As required
d. Coordinate flight procedures (FAA, industry, U.S. military, foreign governments).	As required
e. Perform quality control and standardization functions with respect to flight procedures and related matters.	As required
f. Provide technical advice and assistance to interested civil and military organizations relating to flight procedure planning and development.	As required
g. Participate in program evaluations and implement new and improved policies, methods and procedures.	As required

Work Functions	Planning Norms
h. Initiate waiver requests in support of non-standard application of criteria.	As required
i. Participate in technical committees and work groups.	As required
j. Participate in budget and planning programs with respect to requirements for and the operational use of electronic and visual navigation aids.	As required

30. SPECIAL WORK FUNCTIONS - AIRCRAFT SERVICES BASE. In addition to the applicable Aircraft Program work functions in the preceding paragraphs, the ASB is assigned certain functions embodying an agencywide responsibility.

a. Develop and disseminate technical standards and guidance with respect to FAA aircraft maintenance, operations and support.	As required
b. Schedule, and monitor or perform major overhaul of FAA aircraft.	Appendix 1 Page 6
c. Monitor or perform overhaul and repair of aircraft stocks and stores.	As required
d. Provide emergency engine change and other maintenance assistance in support of regional flight programs.	On request
e. Devise and issue aircraft and equipment modifications technical orders, perform modifications and distribute modification kits.	As required
f. Provide engineering services in support of the Aircraft Program.	As required
g. Accomplish nonprogrammed workload and special projects assigned by Washington Headquarters.	On request

31.-35. RESERVED.

CHAPTER 5. FLIGHT STANDARDS NATIONAL FIELD OFFICE

36. GENERAL. Operations, Flight Inspection, Flight Procedures, and Line Maintenance Branches. Guidance material is contained in Chapter 4 of this handbook.

37. FLIGHT INSPECTION DATA BRANCH.

Work Functions	Planning Norms
a. Provide Data Reduction and Analysis of Facility Integrity Data and compile data for final report.	Continuous
b. Evaluate final flight inspection reports for compliance and compile data for feedback.	Continuous
c. Compilation of VOR/TACAN/DF Master Data Summary.	Quarterly
d. Update VOR/TACAN/DF Master Date Summary for Operational Use.	Weekly
e. Develop, control and maintain a data base system to support all flight inspection functions.	Continuous
f. Compilation of VORTAC Systems Characteristic Report.	Semiannual
g. Publication of Bearing and Distance Tables.	Periodically
h. Provide a central source for coordination and control of magnetic variation assignments for navigation aids.	Continuous
i. Operation of a Data Storage and Retrieval System (Microfilm) for Documentation of the Integrity of The National Airspace System.	Continuous
j. Special Projects Involving Statistical Studies, Research, Summaries, and Special Management Reports.	As required

Work Functions	Planning Norms
k. Monitor and maintain VOR/TACAN/DME/ILS and PAR NOTAM file. Coordinate with FS, AT, and Military.	Continuous
l. Compilation of PAR System Performance Analysis Rating (SPAR) Summaries.	Continuous
38. STANDARDS DEVELOPMENT BRANCH	
a. Navigation Systems Standards Evaluation.	As required
b. Instrument Procedures Standards Evaluation.	As required
c. Develop Criteria for New Standards.	As required
d. Instrument Procedures Criteria Review.	Annually
e. Coordination (FAA, Industry, Military, Foreign).	As required
f. Technical Assistance.	On demand
39.-40. RESERVED.	

NATIONAL PLANNING GUIDES
(Aircraft Programs)

Function - Work Activities

1. Annual Flight Hour Planning Norms

a. Flight Inspection. Flight hour planning norms (P) Piston Aircraft and (T) Turbo jet Aircraft. Multiply the annual planning norms shown below by the number of facilities to arrive at the flight hour program. For frequency of flight checks see Handbook OA P 8200.1.

Facility	Scheduling Factors: Established Facilities (P)	(T)	New Facilities (P)	(T)	Site Test (P)	(T)	Comm'n (P)	(T)
Single TX GS	7	4	10	5	7	4	14	7
Loczr	6	3	10	5	5	3	10	5
Double TX GS	10	5	15	8			21	11
Loczr	10	5	15	8			15	8
Cap. Eff. GS								
Single TX	7	4	10	5			36	18
Dual TX	10	5	15	8			55	28
Dual Freq. LOC								
Single TX	6	3	10	5			22	11
Dual TX	10	5	15	8			34	17
Turnkey ILS							18	9
ISMLS	7	4	10	6			14	9
SDF			12	6			5	3

	SPAR Probability Factors: 99 - 90 (P)	(T)	89 or less (P)	(T)	Site Test (P)	(T)	Comm'n (P)	(T)
PAR	6	3	9	5	3	2	10	5

	Periodic (P)	(T)	Site Test (P)	(T)	Comm'n (P)	(T)
ASR						
Military	8	4	7	4	20	10
FAA	1	1	7	4	20	10

	SAFI Covered (P)	(T)	Non SAFI (P)	(T)	Site Test (P)	(T)	Comm'n (P)	(T)
VOR/VTAC/TAC (FAA, USN, USAF)	1	1	10	5	9	5	20	10
VOR (USA)	6	3	10	5	9	5	20	10
ARSR(military)	3	2	18	9	12	6	100	55
NDB L/MF			3	2	2	1	3	2
UHF			2	1	2	1	3	2
DF			3	2			4	2
After Accident			25	13				

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When scheduling the following commissioning inspections consideration should be given to accomplishing these inspections concurrently with other inspections to the extent possible so that minimum flight hour expenditure will result.

	SAFI Covered (P)	(T)	Non SAFI (P)	(T)	Site Test (P)	(T)	Comm'n (P)	(T)	
ALS							2	1	
REILS							1	1	
TCOM	These facilities are inspected						2	1	1/
RCOM	concurrently with the associated						5	3	1/
MB	primary facility listed above.						1	1	
VOT							3	2	
SECRA							20	10	
DME/ILS							4	2	
VOR Freq. Change							7	4	
ARSR (FAA)							100	55	
VASI							4	2	

General Guidelines - Flight time will not be allocated for facilities designated directly above. The preceding norms include en route time for facilities located within the conterminous United States. Regions responsible for remotely located facilities outside the conterminous U.S. may include adjustments to provide for extraordinary en route time, based on number of trips required to satisfy annual requirements and aircraft speed faetor.

Adjustments for unscheduled specials (call-backs) should be identified by facility type and flight hour difference from planning norms indicated (+ or -). Adjustment for scheduled special maintenance projects and DLM projects should be identified by facility type. When identification of the above projects is not available, past performance records should be used for estimating this requirement.

Flight Procedure - Normally accomplished concurrently with facility listed above. Where, due to priorities or individual situations, such concurrent accomplishment is not feasible, the annual norm listed below may be applied. (Should not exceed 8% of FAA facility flight hour requirement). Frequency is initially for a new procedure and annually for approach procedures. Recurrent flight checks for other procedures are conducted through surveillance operations concurrently with other scheduled work or on an "as required" basis.

Type Procedure	Type Aircraft (P) or (T)
Route Structure	.5
Approach Procedure	.5
Terminal (Arrival & Departure)	.5
Holding Patterns	1.0
Substitute Routes	.5
Fixes	.2
Obstruction Evaluations	1.0

1/ Commissionings not required unless requested by Facility Engineer.

Other Flight Activities Crew Standardization	DC-3	CV-580	Turbojet
Initial Transition PIC/SIC	20	20	25
Annual Recurrent	6	13	13

Crew standardization flight hours will not be programmed for those pilots scheduled to attend formal training courses during the same FY in the same aircraft.

Test Flight	No. of Flights X .7 hours
Ferry Flight	No. of Flights X 1.2 hours
Emergency Flight (AL & PC)	Estimate
Demonstration Flight	Justified on an individual basis
4040.9 Pilot Flight Checks	2 hours each required flight check

b. Logistics program is accomplished in the Alaskan Region and ASB.

Distance

Number of trips X Average Time = Annual Flight Hour Requirement

c. Evaluation, Currency, and Transportation

Annual flight hours submitted by Regions/Centers will be grouped by Evaluation, Currency and Transportation. Flight hour requirements, however, will be developed and justified for each appropriate purpose of flight listed in Chapter 4, paragraph 27c(1), 1800.12D. It will be the responsibility of each Region/Center to have this justification available for post audit purposes.

d. Research & Development

Flight hour requirements will be indicated by project title and aircraft model.

2. Flight Personnel Staffing Planning Norms.

a. Flight Inspection

	Aircraft	Man Years per 1000 Flight Hours (Includes Clerical) Continental U.S.	Other	
	B-727	9.7	11.5	
	NA-265	6.0	7.8	
	AC-1121	6.0	- -	
*	CV-580	8.3	8.3	*
	DC-3	6.0	6.0	
*	BE-55	6.0	6.0	*
	Rental aircraft	3.7	3.7	
	Rental aircraft with FI Tech.	6.0	6.0	

b. Logistics.

	C-123	- -	3.3	*
*	CV-580	3.3	4.1	

c. Evaluation, Currency, and Transportation.

*	All aircraft (Wash. Hdqtrs.)	1.5	*

d. Training. As Required

NOTE: In the final analysis, the factors used to formulate individual programs and estimates are the responsibility of the formulating organization and should accommodate geographic, organizational, and functional peculiarities.

3. Flight Procedures Specialist Personnel Staffing Norms (Excluding Clerical).

a. Staffing Formula (Applies to FSNFO Staffing Only).

(1) Step One - Multiply the facility count (determined by the number of facilities in the area being staffed, i.e., national, regional, etc.) by the applicable unit time value as indicated below.

FACILITY	X UNIT TIME VALUE	MAN-HOURS
ILS, LDA, LOC	24.8266	
VOR, VTAC, TAC, DME SDF	21.2642	
NDB	10.1366	
DF	2.1136	
Radar	6.6109	
	Facility Man-Hours Total:	

(2) Step Two - Multiply the sum of step one by 3.79%. This figure represents man-hours spent on Terminal Procedures and not directly related to a specific facility, i.e., ALS, VASI, REIL,

(3) Step Three - Add the sum of step one to the product of step two. The results represent man-hours required for Terminal Procedure workload.

(4) Step Four - Multiply the results of step three by 1.0884. This figure represents man-hours required for General Procedure workload.

(5) Step Five - Add the product of step four to the results of step three. This figure represents total man-hours required for procedures development.

(6) Step Six - Divide Step 5 by 1,672 (effective man-hours per man per year). The quotient represents the projected staffing requirements to accomplish the necessary workload.

b. Sample Staffing Problem

(1) Step one -

TYPE FACILITY	COUNT		UNIT TIME VALUE		MAN-HOURS
ILS	435	X	24.8266	=	10,799.5710
VOR	930	X	21.2642	=	19,775.7060
NDB	802	X	10.1366	=	8,129.5532
DF	272	X	2.1136	=	574.8992
RADAR	258	X	6.6109	=	1,705.6122
					40,985.3416

(2) Step Two -

40,985.3416
x 3.79%
1,553.3444

(3) Step Three -

40,985.3416
+ 1,553,3444
42,538.6860

(4) Step Four -

42,538.6860
x 1.0884
46,299.1058

(5) Step Five -

42,538.6860
+46,299.1058
88,837.7918

(6) Step Six

$\frac{88,837.7918}{1,672} = 53.1327$ or 53 Positions Required

* 4. Maintenance Personnel Staffing Planning Norms - Line Maintenance.

Aircraft	Man Years Per 1000 Flight Hours
FSNFO & REGIONS	
B-727 (Flight Inspection)	12.0
NA-265	4.2
NA-265	1.2 2/
AC-1121	4.2 1/
CV-580	5.5 1/
C-123	6.8
DC-3	4.7
DC-3	2.0 1/
BE-80	3.7
BE-55	3.2
NAFEC	
B-727	11.4
NA-265	4.2
AC-1121	4.2 1/
CV-580	5.5 1/
G-159	7.5
AC-680	5.0
WASHINGTON HEADQUARTERS	
L-1329	12.2 4/
G-159	7.5 4/
CE-550	5.7 1/
CE-421	3.0 4/
BE-200	3.8 4/
BE-55	3.0 4/
B-206L	2.0 4/

*

	Aircraft	Man Years Per 1000 Flight Hours	
	AERONAUTICAL CENTER		
*	B-727 (Flight Inspection)	12.0	*
	B-727 (Training)	11.4	
	DC-9	12.3	
	NA-265	4.2	
	AC-1121	4.2	
*	CE-500	4.2	*
	CV-580	12.1 3/	
	CV-580	6.6 2/ 3/	
*	DC-3 (Type II)	3.3 2/ 3/	*

1/ Applies for operational maintenance less numbered inspections.
2/ Applies where airframe and powerplant contractual maintenance arrangements are in effect.
3/ Applies for numbered inspections only.
4/ Includes allowances to provide for emergency and priority flight availability.

b. Major Inspection.

	Aircraft	Manhours Per Unit	
*	L-1329	11,190	*
	B-727	18,750	
	DC-9	6,650	
	NA-265	Reserved	
	AC-1121	Reserved	
*	CV-580	12,018	*
	G-159	Continuous 5/	
	BE-90	3,150	
	C-123	11,725	
	DC-3 (Flight Inspection)	3,750	
*	BE-200	Reserved	*
	CE-500	Reserved	
	CE-421	Reserved	
*	AC-680	3,392	
	BE-80	1,890	
	BE-55	1,890	
	Aircraft Storage	120	

5/ Work is accomplished during numbered inspections. *

* 5. Nucleus Staffing - Aircraft Maintenance Bases. In addition to the technical staffing for maintenance referred to in paragraph 4, there is fixed, indirect staffing related to management, supervisory, administrative, and other supporting functions that are not included in the planning norms but are required to adequately staff an aircraft maintenance base. This staffing is identified by position organizational titles as follows:

a. Aircraft Maintenance Bases Performing Less Than the Full Range of Aircraft Maintenance/Category I Avionic Maintenance.

(1) Chief, Aircraft Maintenance Base - 1
(2) Secretary - 1
(3) Supply Manager - 1
(4) Supply Clerk - 1

b. Aircraft Maintenance Bases Performing Category II Avionic Maintenance. The following structure will apply to those bases performing in-house Category II avionic maintenance and the full range of aircraft line maintenance performed by FAA personnel or by contract.

(1) Chief, Aircraft Maintenance Base - 1
(2) Secretary - 1
(3) Chief, Avionics Maintenance Unit - 1
(4) Aircraft Maintenance Specialists (Quality Control/Contractor Monitors - 2
(5) Supply Manager - 1
(6) Clerk - 1

c. Aircraft Maintenance Base Performing Full Range of Aircraft Line Maintenance/Category II Avionic Maintenance. The following structure will apply to those bases performing in-house the full range of aircraft line maintenance and Category II avionic maintenance.

(1) Chief, Aircraft Maintenance Base - 1
(2) Secretary - 1
(3) Chief, Aircraft Maintenance Unit - 1
(4) Chief, Avionic Maintenance Unit - 1
(5) Chief, Quality Control Unit - 1
(6) Clerk-Typist - 1
(7) Chief, Equipment and Support Unit - 1
(8) Clerk-Typist - 1
(9) Supply Counterman - 1 *

END

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