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FAA STATISTICAL HANDBOOK OF AVIATION. CALENDAR YEAR 1979.(U)
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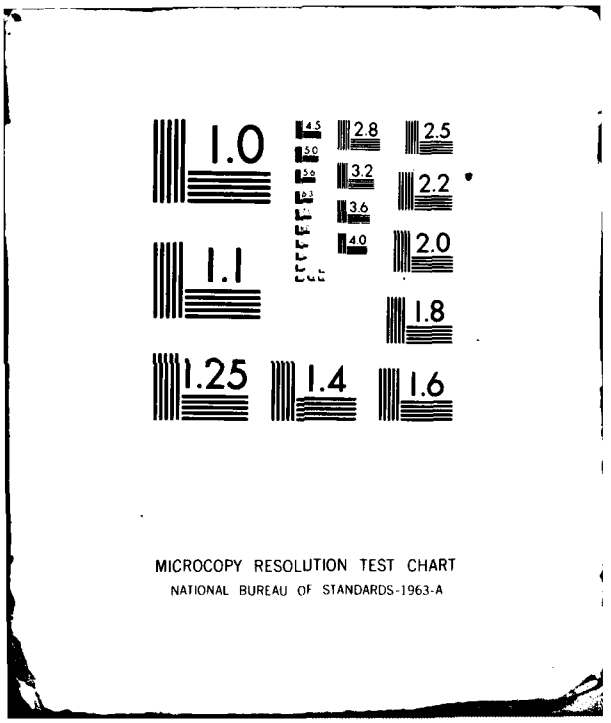

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16. Abstract

This report presents statistical information pertaining to the Federal Aviation Administration, the National Airspace System, Airports, Airport Activity, U.S. Civil Air Carrier Fleet, U.S. Civil Air Carrier Operating Data, Airmen, General Aviation Aircraft, Aeronautical Production and Exports, Aircraft Accidents, and a Glossary of the terms used in this publication.

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Federal Aviation Administration

FAA Statistical Handbook of Aviation

Calendar Year 1979

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Washington, D.C. 20402

PREFACE

The FAA Statistical Handbook of Aviation is published annually by the Federal Aviation Administration (FAA). Its prime purpose is to serve as a convenient source for historical data, and to assist in evaluating progress. This edition contains data on major civil aviation activities for the period ending December 31, 1979.

The handbook should provide a valuable source of information for the Department of Transportation (DOT), operating offices of the FAA, the Civil Aeronautics Board (CAB), and other government agencies, as well as non-government organizations interested in aviation.

Chapter I deals with the FAA and its functions. This section also includes a comparison of the agency's appropriations from fiscal years 1977-1980, and the agency's personnel complement for 6-month intervals from June 30, 1970, to December 31, 1979.

National Airspace System data reflecting the workload of the FAA air traffic facilities--terminal and en route--are contained in Chapter II. This chapter contains air traffic activity reported by FAA-operated airport traffic control towers, air route traffic control centers, and domestic and international flight service stations.

Selected statistics concerning the Nation's Airport Facilities are presented in Chapter III by state within FAA regions. In addition to the total count of these facilities, this chapter includes statistics pertaining to the physical characteristics (paved vs. unpaved runways, lighted vs.

unlighted runways, length of runways, etc.), size of populated areas served, funds allocated for airport development, etc.

Airport activity statistics comprising Chapter IV were prepared from data published in the calendar year 1979 edition of Airport Activity Statistics of the Certificated Route Air Carriers, issued jointly by the CAB and the FAA. In addition, this chapter presents individual passenger and traffic activity data from some of the Nation's international airports.

The U.S. Civil Air Carrier Fleet, as of December 31, 1979, is described in detail in Chapter V. These statistics were developed from Monthly Aircraft/Engine Utilization Reports submitted by the air carrier operators. The aircraft population discussed here is not an inventory of the aircraft owned by the air carriers, but represents the aircraft actually used by the air carrier fleet during December 1979.

U.S. Civil Air Carrier Operating Data--revenue passenger miles flown, available seat-miles and enplanements, revenue ton-miles flown, revenue aircraft miles flown, personnel, payroll, average salary, and operating revenues and expenses of the certificated route air carriers--are presented in Chapter VI. These statistics were obtained from schedules submitted by the certificated route air carriers to the CAB.

The Airmen data shown in Chapter VII were obtained from official airmen certification records maintained by the FAA Aeronautical Center in Oklahoma City, Oklahoma.

The general aviation aircraft data presented in Chapter VIII were collected from the General Aviation Activity and Avionics Survey. Numbers of active aircraft and hours flown are shown for each aircraft type.

Aircraft Accidents, both air carrier and general aviation, appear in Chapter IX. Up to 1965, air carrier accident data were furnished by the CAB. Comparable data for 1965 to 1979, inclusive, were made available by the National Transportation Safety Board (NTSB). General aviation accident data from 1959 to 1965 were obtained from the CAB. The following two years data were collected by the NTSB. However, during 1957 and 1958, the CAB and the Civil Aeronautics Administration shared responsibility for the investigation and analysis of general aviation accidents.

The FAA Statistical Handbook of Aviation is prepared by the Information Analysis Branch, Information and Statistics Division, Office of Management Systems, with the cooperation of other FAA and DOT offices. Appreciation is expressed to the Civil Aeronautics Board, U.S. Bureau of the Census, U.S. Department of Labor, Interstate Commerce Commission, Immigration and Naturalization Service, and many municipalities and private organizations for their assistance.

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Federal Aviation Administration

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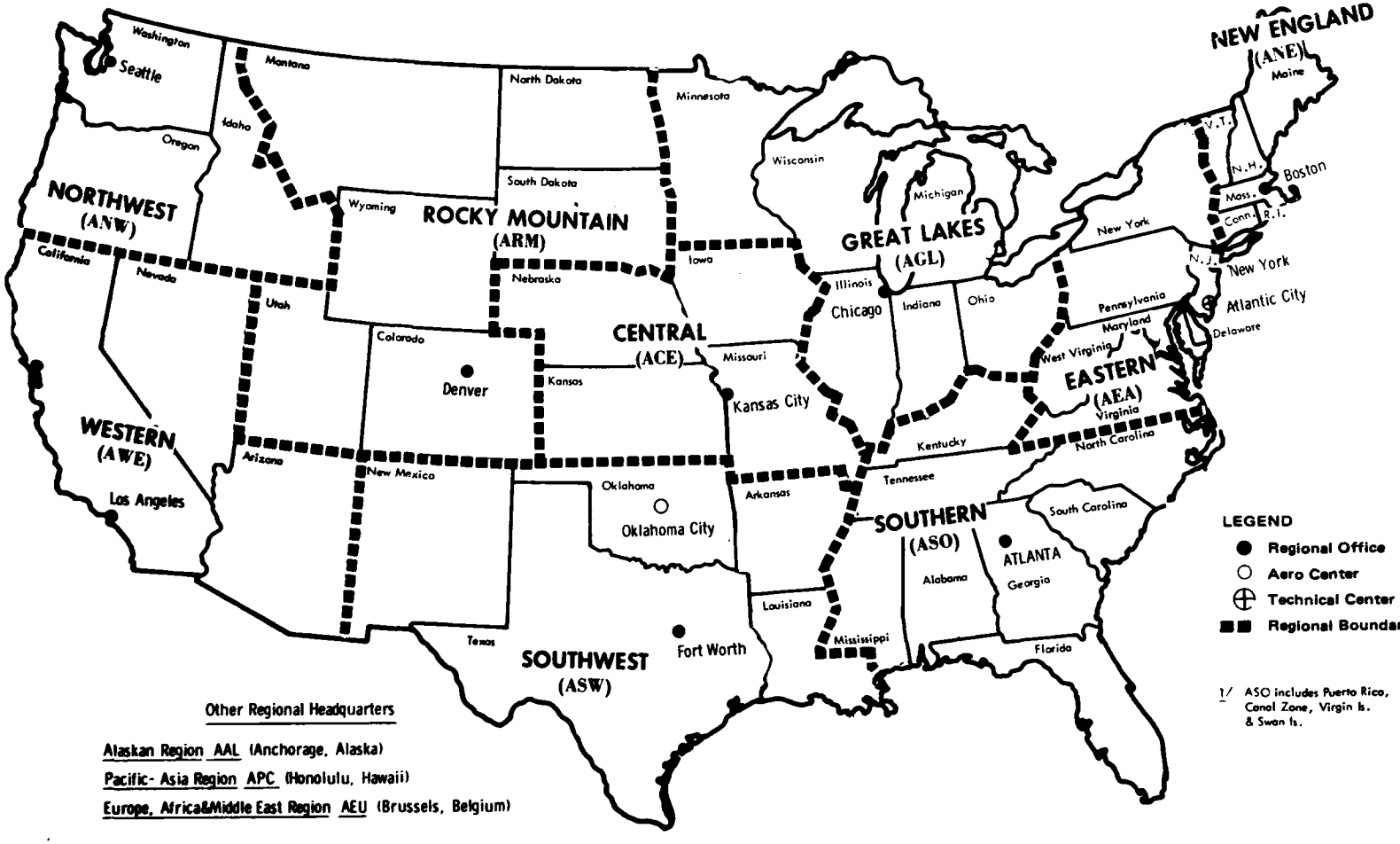
Including Locations of Regional Headquarters & Centers



LEGEND

- ● Regional Office
- ○ Aero Center
- ⊕ Technical Center
- ■■ Regional Boundary

1/ ASO includes Puerto Rico, Canal Zone, Virgin Is. & Swan Is.

Other Regional Headquarters

Alaskan Region AAL (Anchorage, Alaska)

Pacific- Asia Region APC (Honolulu, Hawaii)

Europe, Africa&Middle East Region AEU (Brussels, Belgium)

AX

I. THE FEDERAL AVIATION ADMINISTRATION

The Department of Transportation Act of 1966 established a new executive department known as the Department of Transportation. The general welfare, economic growth, stability, and security of the Nation pointed to the need for the development of national transportation policies and programs effectively utilizing the Nation's transportation resources. The Act provided for inclusion of the Federal Aviation Agency in the Department as the Federal Aviation Administration.

Directed by an Administrator, who is appointed by the President, by and with the advice and consent of the Senate, the FAA has as its primary function fostering the development and safety of American aviation. More specifically, the FAA is responsible for developing the major policies necessary to guide the long-range growth of civil aviation; modernizing the air traffic control system; establishing in a single authority the essential management functions necessary to support the common needs of civil and military operations; providing for the most effective and efficient use of the airspace over the United States; and for the rulemaking responsibilities relative to these functions.

The FAA constructs, operates, and maintains the National Airspace System and the facilities which are a part of the system; it allocates and regulates the use of the airspace; it ensures adequate separation between aircraft operating in controlled airspace; and, through research

and development programs, it provides new systems and equipment for improving utilization of the Nation's airspace.

The Federal-aid Airport Program (FAAP) authorized the FAA to make grants of federal funds to sponsors for airport development and for advanced planning and engineering. Under FAAP, approximately $1.2 billion were granted by FAA to airport sponsors for airport development purposes from 1947 through 1970. FAAP was superseded by the Airport Development Act of 1970. The FAA maintains and operates Washington National and Dulles International airports. Dulles International is the first airport in the world specifically designed for the use of commercial jet transports.

The FAA prescribes and administers rules and regulations concerning airmen competency, aircraft airworthiness, and air traffic control. It promotes safety through certification of airmen, aircraft, and flight and aircraft maintenance schools. It reviews the design, structure, and performance of new aircraft to insure the safety of the flying public.

Services provided by FAA toward the development of aviation and air commerce include:

Dissemination of news and information on civil aviation generally.

Publication of flight information data for pilots.

Technical aviation assistance to other governments, operation of overseas civil aviation missions, and the aviation training of foreign nationals.

Development of medical standards for airmen through aviation medical research.

Research and development in the field of aeronautics and electronics.

Other activities required to encourage and foster the world-wide development of civil aviation and air commerce.

Policies governing these programs are developed in the Washington headquarters of FAA, and are executed by field employees under the supervision of regional offices strategically located throughout the United States as well as the FAA Technical Center at Atlantic City, New Jersey, and the Mike Marononey Aeronautical Center at Oklahoma City, Oklahoma.

TABLE 1.1

FAA APPROPRIATIONS: FISCAL YEARS 1977 THROUGH 1980

Appropriation	1977	1978	1979	1980
Total	2,566.1	2,792.5	3,150.3	3,274.1
Operations	1,487.8	1,628.3(c)	1,737.7	1,849.5
Operations (Airport and Airway Trust Fund)	250.0	275.0	300.0	325.0
Facilities and Equipment (Airport and Airway Trust Fund)	200.0	209.0(d)	345.4(f)	293.0
Grants-in-Aid for Airports (Airport and Airway Trust Fund)	510.0(a)	555.0	644.1	677.0
Research, Engineering and Development (Airport and Airway Trust Fund)	74.4	80.8	75.1	75.0
Metropolitan Washington Airports	26.5	27.8	29.5	34.1
Facilities, Engineering, and Development	17.4(b)	16.6(e)	18.5(g)	20.5

(a) Does not include $35,000,000 additional obligational authority made available by the Economic Stimulus Act, P.L. 95-29.
(b) Includes $1,900,000 additional obligational authority transferred from other accounts.
(c) Includes $5,600,000 additional obligational authority transferred from other accounts.
(d) Includes $9,000,000 additional obligational authority transferred from other accounts.
(e) Includes $2,350,000 additional obligational authority transferred from other accounts.
(f) Includes $54,363,000 additional obligational authority transferred from other accounts.
(g) Includes $145,000 additional obligational authority transferred from other accounts.

TABLE 1.2

FAA EMPLOYEES AT END OF FISCAL AND CALENDAR YEARS 1970 THROUGH 1979*

DATE	FAA TOTAL PAID	TOTAL WASHINGTON HQ**	FULL TIME PERMANENT		OTHER FIELD	TOTAL FULL TIME PERMANENT
			WASHINGTON OFFICE***	WASHINGTON FIELD***		
6/70	51,438	3,689	2,743	946	46,703	50,392
12/70	53,088	3,778	2,820	958	48,383	52,161
6/71	54,515	3,663	2,752	911	49,910	53,537
12/71	54,220	3,636	2,748	888	49,567	53,203
6/72	53,295	3,505	2,634	871	48,767	52,272
12/72	52,497	3,429	2,535	894	48,214	51,643
6/73	53,646	3,437	2,585	852	49,190	52,627
12/73	53,322	3,408	2,533	875	48,740	52,148
6/74	56,386	3,749	2,739	1,010	50,212	53,961
12/74	55,820	3,650	2,669	981	50,226	53,876
6/75	57,678	3,779	2,819	960	51,126	54,905
12/75	56,732	3,696	2,774	922	50,999	54,695
6/76	59,064	3,858	2,910	948	52,264	56,122
9/76	58,438	3,824	2,880	944	52,167	55,991
12/76	57,790	3,795	2,842	953	51,728	55,523
9/77	58,081	3,623	2,683	940	52,137	55,760
12/77	57,631	3,538	2,612	926	51,891	55,429
9/78	57,494	3,212	2,303	909	52,015	55,227
12/78	57,005	3,193	2,272	921	51,747	54,940
9/79	56,435	3,012	2,124	888	51,432	54,444
12/79	56,394	3,066	2,144	922	57,630	54,564

NOTE: THE NUMBERS IN THIS TABLE WERE REVISED AS OF DECEMBER 1979. THEY NOW EXCLUDE MILITARY PERSONNEL. THE 1973 AND 1974 FIGURES NOW INCLUDE SECOND CAREER EMPLOYEES.

* INCLUDES ALL PAID CIVILIAN EMPLOYEES (FULL-TIME, PART-TIME, AND INTERMITTENT).

** WASHINGTON HEADQUARTERS INCLUDES ALL EMPLOYEES PAID AND SERVICED BY WASHINGTON HEADQUARTERS, BOTH THOSE STATIONED INSIDE AND OUTSIDE WASHINGTON, D.C.

*** WASHINGTON OFFICE INCLUDES ALL PAID WASHINGTON HEADQUARTERS EMPLOYEES WHOSE DUTY STATION IS WASHINGTON, D.C. WASHINGTON FIELD INCLUDES ALL PAID WASHINGTON HEADQUARTERS EMPLOYEES WHOSE DUTY IS OUTSIDE WASHINGTON, D.C. (E.G., NATIONAL AND DULLES AIRPORTS, IN OTHER STATES, OR FOREIGN COUNTRIES).

II. The National Airspace System

This chapter furnishes terminal and enroute air traffic activity information of the National Airspace System. The data have been reported by the FAA-operated Airport Traffic Control Towers, Air Route Traffic Control Centers, and Flight Service facilities (Flight Service Stations, Combined Station/Towers and International Flight Service Stations). These reports are used as a guide in determining the need for larger or additional facilities, and possible changes in the number of personnel at existing facilities.

Data for towers are reported on Airport Operations and Instrument Approaches Monthly Summary (FAA Form 7230-11). This form contains landings and takeoffs (aircraft operations) reported by the towers by aviation category--air carriers, air taxi, general aviation, and military; instrument operations (IFR landings and takeoffs) and instrument approaches (IFR landings) are also included. Data for Air Route Traffic Control Centers (ARTCC's) are reported on ARTCC Operations and Instrument Approaches Monthly Summary (FAA Form 7230-12). Data contained on this form show departures, overs, and aircraft handled, plus instrument approaches handled by the ARTCC's. Activity of flight service stations, international flight service stations and combined station/towers is submitted on Monthly Activity Record--Flight Service Stations (FAA Form 7230-013). More detailed data pertaining to activity of these facilities may be found in the fiscal year 1979 edition of FAA Air Traffic Activity.

TABLE 2.1

U.S. AIR ROUTE AIRWAY MILEAGE: 1970 - 1979*

(CONTIGUOUS 48 STATES)

DECEMBER 31	VERY HIGH FREQUENCY VOR/VORTAC		
	LOW ALTITUDE		JET ROUTES
	DIRECT	ALTERNATE	
1970	140,268	33,215	112,662
1971	142,093	33,274	114,373
1972	143,241	33,436	117,417
1973	144,578	32,999	119,672
1974	144,939	32,999	122,372
1975	148,834	32,320	123,258
1976	150,172	31,888	130,160
1977	152,947	31,270	131,968
1978	155,242	31,235	134,709
1979	157,853	31,625	135,920

* MILEAGE SHOWN IN NAUTICAL MILES BASED ON NATIONAL OCEAN SURVEY FIGURES.

TABLE 2.2

FAA AIR ROUTE FACILITIES AND SERVICES: 1970 THROUGH 1979

December 31	VOR VORTAC	Nondirectional Radio Beacons	Air Route Traffic Control Centers	Airport Traffic Control Towers	Combined Station/ Towers	Flight Service Stations	International Flight Service Stations	Instrument Landing Systems	Airport Surveillance Radar
1970	964	640	27	288	46	332	8	310	120
1971	980	669	27	347	44	331	8	337	122
1972	991	706	27	355	42	324	7	403	125
1973	995	739	27	403	29	315	7	467	142
1974	1,000	793	27	417	21	320	7	490	156
1975	1,011	848	26	487	21	321	7	580	177
1976	1,020	920	25	488	16	321	7	640	175
1977	1,021(A)	959(B)	25(C)	495(D)	7	319	7	678(E)	182(F)
1978(R)	1,020(A)	988(B)	25(C)	494(D)	7	319	6	698(E)	185(F)
1979	1,028	1,015	25	499	5	318	6	753	192

(A)Includes 58 nonfederal and 44 military.
(B)Includes 632 nonfederal and 59 military.
(C)Includes 2 military combined center/radar approach control facilities (CERAP).
(D)Includes 30 nonfederal and 43 military.
(E)Includes 7 Landing Directional Aid (LDA), 53 nonfederal, and 6 military.
(F)Includes 29 military.
(R)Revised

TABLE 2.3--AIR TRAFFIC ACTIVITY AT AIR ROUTE TRAFFIC CONTROL CENTERS, BY AVIATION CATEGORY--FISCAL YEARS 1975-1979

	Year	Total	Annual change	Air Carrier	Annual change	Air Taxi	Annual change	General Aviation	Annual change	Military	Annual change
IFR Aircraft Handled 1/	1979	29,909,712	+7%	14,003,540	+3%	2,328,243	+20%	8,827,100	+13%	4,750,829	+2%
	1978	28,055,382	+8	13,642,071	+5	1,931,216	+19	7,813,848	+14	4,668,247	+4
	1977	25,973,299	**	12,986,985	**	1,639,300	**	6,856,057	**	4,490,957	**
	1976	23,924,963	+1	12,406,660	(*)	1,395,304	+6	5,956,575	+8	4,166,424	-5
	1975	23,585,999	+3	12,370,936	(*)	1,316,590	+23	5,520,551	+9	4,377,922	+1
IFR Departures	1979	11,645,499	+6	5,042,781	+1	1,115,835	+21	3,819,669	+13	1,667,214	-1
	1978	11,007,775	+8	5,014,806	+5	923,731	+18	3,387,877	+14	1,681,361	+3
	1977	10,178,872	**	4,790,929	**	781,158	**	2,971,633	**	1,635,152	**
	1976	9,403,277	+2	4,616,439	(*)	668,362	+6	2,584,473	+8	1,533,953	-4
	1975	9,258,198	+3	4,623,462	(*)	631,750	+23	2,399,351	+9	1,603,635	-1
IFR Overs	1979	6,618,714	+10	3,917,978	+8	96,573	+15	1,187,762	+14	1,416,401	+8
	1978	6,039,832	+8	3,612,459	+6	83,754	+9	1,038,094	+14	1,305,525	+7
	1977	5,615,555	**	3,405,127	**	76,984	**	912,791	**	1,220,653	**
	1976	5,118,509	+1	3,173,782	+2	58,580	+10	787,629	+9	1,098,518	-6
	1975	5,069,603	+2	3,124,012	(*)	53,090	+13	721,849	+6	1,170,652	+6

1/The number of IFR Departures multiplied by two to account for IFR approaches, plus the number of IFR Overs.

(*)Less than 0.5 percent.

**Percent change not calculated because of change in fiscal year to October 1 - September 30. Prior to 1977 fiscal year was July 1 - June 30.

TABLE 2.4--AIR TRAFFIC ACTIVITY AT AIRPORT TRAFFIC CONTROL TOWERS, BY AVIATION CATEGORY--FISCAL YEARS 1975-1979

	Year	Total	Annual change	Air Carrier	Annual change	Air Taxi	Annual change	General Aviation	Annual change	Military	Annual change
Total Aircraft Operations	1979	69,039,372	+3%	19,406,570	+3%	4,370,514	+16%	50,716,626	+2%	2,545,662	(*)
	1978	67,173,434	+1	10,063,259	+3	3,773,484	+14	50,798,779	(*)	2,537,912	-6%
	1977	66,724,291	**	9,770,137	**	3,296,502	**	50,958,847	**	2,698,805	**
	1976	62,491,505	+6	9,339,479	(*)	2,867,621	+6	47,594,278	+8%	2,690,127	(*)
	1975	58,934,700	+4	9,374,363	-1	2,708,901	+15	44,159,682	+5	2,691,754	-4
Itinerant Operations	1979	45,415,572	+4	10,406,570	+3	4,370,514	+16	29,407,844	+3	1,230,644	+2
	1978	43,562,963	+3	10,063,259	+3	3,773,484	+14	28,515,850	+1	1,210,370	-4
	1977	42,425,767	**	9,770,137	**	3,296,502	**	28,101,396	**	1,257,732	**
	1976	39,660,709	+6	9,339,479	(*)	2,867,621	+6	26,180,772	+8	1,272,837	-1
	1975	37,552,859	+4	9,374,363	-1	2,708,901	+15	24,183,342	+5	1,286,253	-2
Local Operations	1979	23,623,800	(*)	---	---	---	---	22,308,782	(*)	1,315,018	-1
	1978	23,610,471	-3	---	---	---	---	22,282,929	-3	1,327,542	-8
	1977	24,298,524	**	---	---	---	---	22,857,451	**	1,441,073	**
	1976	22,830,796	+7	---	---	---	---	21,413,506	+7	1,417,290	+1
	1975	21,381,841	+3	---	---	---	---	19,976,340	+4	1,405,501	-6

(*)Less than 0.5 percent.

**Percent change not calculated because of change in fiscal year to October 1 - September 30. Prior to 1977 fiscal year was July 1 - June 30.

TABLE 2.5--AIR TRAFFIC ACTIVITY AT FAA FACILITIES, BY AVIATION CATEGORY--FISCAL YEARS 1975-1979

	Year	Total	Annual change	Air Carrier	Annual change	Air Taxi	Annual change	General Aviation	Annual change	Military	Annual change
Total Instrument Operations	1979	36,225,027	+8%	10,737,637	+3%	3,657,696	+19%	17,907,628	+10%	3,922,066	+7%
	1978	33,456,726	+6	10,421,496	+4	3,066,809	+20	16,310,259	+8	3,658,162	-2
	1977	31,518,742	**	10,053,440	**	2,563,882	**	15,150,698	**	3,750,782	**
	1976	28,097,463	+8	9,461,957	-1	2,156,475	+16	12,754,841	+19	3,724,190	-6
	1975	26,063,156	+8	9,537,250	+1	1,858,651	+29	10,718,382	+17	3,948,873	-2
Total Instrument Approaches 1/	1979	2,482,606	+12	940,892	+10	315,804	+11	1,106,001	+10	119,909	+11
	1978	2,223,426	+25	853,853	+27	285,508	+47	975,766	+20	108,299	+10
	1977	1,776,691	**	670,064	**	194,347	**	813,612	**	98,668	**
	1976	1,671,558	-12	675,213	-16	176,599	-10	706,625	-8	113,121	-8
	1975	1,892,335	+5	803,397	+1	196,820	+18	769,281	+7	122,837	(*)
Total Instrument Approaches at Control Facilities	1979	2,316,633	+13	912,272	+11	287,972	+11	1,002,597	+15	113,792	+12
	1978	2,049,828	+27	820,143	+28	260,040	+49	868,313	+22	101,332	+10
	1977	1,618,381	**	640,895	**	174,015	**	710,941	**	92,530	**
	1976	1,519,443	-11	640,465	+15	154,909	-7	617,523	-7	106,546	-5
	1975	1,698,432	+3	753,206	+1	166,087	+16	667,136	+5	112,003	-2

1/Includes instrument approaches at Air Route Traffic Control Centers.

(*)Less than 0.5 percent.

**Percent change not calculated because of change in fiscal year to October 1 - September 30. Prior to 1977 fiscal year was July 1 - June 30.

TABLE 2.6--AIR TRAFFIC ACTIVITY AT FLIGHT SERVICE FACILITIES--FISCAL YEARS 1975-1979

	Year	Flight plans originated						Airport advisories		Pilot briefs	
		Total	Annual change	IFR-DVFR	Annual change	VFR	Annual change	Total	Annual change	Total	Annual change
Flight Service Stations	1979	9,429,862	+4%	6,866,112	+8%	2,563,750	-4%	3,191,382	-2%	18,709,691	+3%
	1978	9,041,583	+5	6,369,364	+9	2,672,219	-3	3,244,961	+6	18,230,172	+8
	1977	8,607,414	**	5,858,565	**	2,748,849	**	3,054,885	**	16,852,412	**
	1976	8,028,349	+2	5,357,865	+4	2,670,484	-2	2,878,486	-3	15,938,507	-1
	1975	7,886,054	+3	5,173,777	+5	2,712,277	(*)	2,964,845	-5	16,072,668	+5
Combined Station/ Towers	1979	38,610	-17	6,335	-8	32,275	-19	0	0	25,924	+2
	1978	46,739	-27	6,923	-57	39,816	-17	0	0	25,447	-45
	1977	63,932	**	16,054	**	47,878	**	0	0	45,937	**
	1976	96,963	+5	34,212	-3	62,751	+10	0	0	92,979	+5
	1975	92,293	-15	35,098	-12	57,195	-17	0	0	88,245	-17
International Flight Service Stations	1979	525,880	+14	225,770	+13	300,110	+14	3,526	+98	582,011	+16
	1978	462,282	+10	200,166	+13	262,116	+8	1,778	+10	499,914	+31
	1977	420,536	**	177,119	**	243,417	**	1,615	**	382,959	**
	1976	371,799	+3	135,498	+3	236,301	+3	1,205	+12	329,728	-5
	1975	360,434	-1	131,874	-1	228,560	-1	1,071	-19	348,619	-3

(*)Less than 0.5 percent.

**Percent change not calculated because of change in fiscal year to October 1 - September 30. Prior to 1977 fiscal year was July 1--June 30.

TABLE 2.7--AIRCRAFT CONTACTED AT FLIGHT SERVICE FACILITIES, BY AVIATION CATEGORY--FISCAL YEARS 1975-1979

	Year	Total	Annual change	Air Carrier	Annual change	Air Taxi	Annual change	General Aviation	Annual change	Military	Annual change
Flight Service Stations	1979	10,110,581	-1%	417,909	+4%	839,552	(*)	8,420,876	(*)	432,244	-18%
	1978	10,147,333	+1	401,192	+11	838,268	+10%	8,382,210	+1%	525,663	-9
	1977	10,008,516	**	359,899	**	763,995	**	8,308,058	**	576,564	**
	1976	9,577,407	-2	374,170	-11	731,127	+4	7,895,816	-1	576,294	-16
	1975	9,794,845	+1	418,360	-6	699,925	+9	7,988,973	+1	687,587	+2
IFR-DVFR	1979	2,038,070	+6	336,739	+6	246,554	+13	1,317,357	+11	137,420	-29
	1978	1,917,549	+17	318,789	+14	218,344	+26	1,187,224	+21	193,192	-4
	1977	1,637,448	**	279,199	**	173,224	**	984,207	**	200,818	**
	1976	1,525,214	-6	298,600	-12	161,547	-3	859,131	-3	205,936	-8
	1975	1,618,865	+8	339,721	+5	166,969	+17	887,159	+8	225,016	+8
VFR	1979	8,072,511	-2	81,170	-1	592,998	-4	7,103,519	-1	294,824	-11
	1978	8,229,784	-2	82,403	+2	619,924	+5	7,194,986	-2	332,471	-12
	1977	8,371,068	**	80,700	**	590,771	**	7,323,851	**	375,746	**
	1976	8,052,193	-2	75,570	-4	569,580	+7	7,036,685	-1	370,358	-20
	1975	8,175,980	(*)	78,639	-34	532,956	+6	7,101,814	(*)	462,571	(*)

(*)Less than 0.5 percent.

**Percent change not calculated because of change in fiscal year to October 1 - September 30. Prior to 1977 fiscal year was July 1 - June 30.

TABLE 2.7--AIRCRAFT CONTACTED AT FLIGHT SERVICE FACILITIES, BY AVIATION CATEGORY--FISCAL YEARS 1975-1979 - CONTINUED

	Year	Total	Annual change	Air Carrier	Annual change	Air Taxi	Annual change	General Aviation	Annual change	Military	Annual change
International Flight Service Stations	1979	784,369	+17%	128,645	+23%	235,570	+3%	390,216	+27%	29,938	-2%
	1978	670,904	+2	104,468	-13	228,097	-4	307,929	+13	30,410	+20
	1977	656,683	**	120,170	**	238,397	**	272,870	**	25,246	**
	1976	429,394	+1	87,109	+15	123,059	-5	205,465	(*)	13,761	-10
	1975	425,767	+22	75,824	+7	129,110	+4	205,467	+45	15,366	+22
IFR-DVFR	1979	165,482	+15	125,725	+21	4,736	+32	29,396	-1	5,625	-9
	1978	143,421	-7	103,906	-12	3,581	-15	29,767	+16	6,167	-4
	1977	155,029	**	118,712	**	4,204	**	25,714	**	6,399	**
	1976	109,160	+14	85,998	+16	3,339	-13	15,656	+19	4,167	-12
	1975	95,775	+15	74,065	+9	3,842	+36	13,135	+57	4,733	+20
VFR	1979	618,887	+17	2,920	+420	230,834	+3	360,820	+28	24,313	(*)
	1978	527,483	+5	562	-61	224,516	-4	278,162	+13	24,243	+29
	1977	501,654	**	1,458	**	234,193	**	247,156	**	18,847	**
	1976	320,234	-3	1,111	-37	119,720	-4	189,809	-1	9,594	-10
	1975	329,992	+24	1,759	-26	125,268	+3	192,332	+44	10,633	+23

(*)Less than 0.5 percent.

**Percent change not calculated because of change in fiscal year to October 1--September 30. Prior to 1977 fiscal year was July 1 - June 30.

TABLE 2.7--AIRCRAFT CONTACTED AT FLIGHT SERVICE FACILITIES, BY AVIATION CATEGORY--FISCAL YEARS 1975-1979 - CONTINUED

	Year	Total	Annual change	Air Carrier	Annual change	Air Taxi	Annual change	General Aviation	Annual change	Military	Annual change
Combined Station/ Tower	1979	78,660	-21%	550	-46%	43,637	-24%	27,798	-17%	6,675	-13%
	1978	99,784	-38	1,017	-76	57,712	-10	33,356	-59	7,699	-31
	1977	160,553	**	4,279	**	64,175	**	80,940	**	11,159	**
	1976	213,670	+6	5,099	+116	55,486	+36	139,079	-2	14,006	-18
	1975	201,725	-16	2,365	-5	40,867	+19	141,494	-23	16,999	-18
IFR-DVFR	1979	3,889	-10	540	-12	1,517	-5	1,057	-7	775	-32
	1978	4,333	-68	616	-81	1,443	-59	1,134	-76	1,140	-50
	1977	13,717	**	3,248	**	3,507	**	4,666	**	2,296	**
	1976	20,231	+28	4,794	+121	3,645	+240	8,206	-4	3,586	-11
	1975	15,775	-11	2,170	-6	1,072	+103	8,507	-14	4,026	-20
VFR	1979	74,771	-22	10	-98	42,120	-25	26,741	-17	5,900	-10
	1978	95,451	-35	401	-61	56,269	-7	32,222	-58	6,559	-26
	1977	146,836	**	1,031	**	60,668	**	76,274	**	8,863	**
	1976	193,439	+4	305	+56	51,841	+30	130,873	-2	10,420	-20
	1975	185,950	-17	195	+15	39,795	+18	132,987	-24	12,973	-17

**PERCENT CHANGE NOT CALCULATED BECAUSE OF CHANGE IN FISCAL YEAR TO OCTOBER 1 - SEPTEMBER 30. PRIOR TO 1977 FISCAL YEAR WAS JULY 1--JUNE 30.

III. AIRPORTS

Information about U.S. civil and joint-use landing facilities (including airports, heliports, stolports, and seaplane bases) were furnished by the FAA Office of Airport Standards. This information was obtained through physical inspection and mail solicitations, and was reported on the Airport Master Record (Form FAA 5010-1) and FAA Landing Facilities Information Request on Airports, Heliports, Stolports, and Seaplane Bases (Forms 5010-2 and 5010-5).

TABLE 3.1

AIRPORTS ON RECORD WITH FAA: 1970 THROUGH 1979*

Year	Total	With Runway Lights	With Paved Runways	Airports of Entry
1970	11,261	3,554	3,805	61
1971	12,070	3,759	4,176	64
1972	12,405	3,827	4,390	63
1973	12,700	3,880	4,527	60
1974	13,062	3,999	4,716	61
1975	13,251	4,171	4,865	62
1976	13,770	4,362	5,106	76
1977	14,117	4,483	5,313	70
1978	14,574	4,567	5,484	70
1979	14,746	4,631	5,618	60**

*Includes seaplane bases, heliports, stolports, and military fields having joint civil-military use.

**Excludes landing rights airports.

TABLE 3.2

U.S. CIVIL AND JOINT-USE AIRPORTS, HELIPORTS, STOLPORTS, AND SEAPLANE BASES, AND REPORTED ABANDONMENTS ON RECORD, BY FAA REGION AND STATE: DECEMBER 31, 1979

FAA Region and State	Total Aircraft Facilities	Airports	Heliports	Stolports	Seaplane Bases	Reported Abandonments During Year
Total	14,746	12,064	2,107	50	524	458
United States--Total*	14,693	12,030	2,093	50	520	458
Alaskan--Total	734	512	39	---	183	27
Central--Total	1,325	1,239	73	3	10	40
Iowa	258	240	16	1	1	9
Kansas	374	358	11	1	4	6
Missouri	374	332	36	1	5	12
Nebraska	319	309	10	---	---	13
Eastern--Total	1,961	1,403	485	8	65	87
Delaware	35	23	12	---	---	---
District of Columbia	18	2	16	---	---	1
Maryland	144	106	34	3	1	8
New Jersey	266	123	131	---	12	6
New York	482	370	80	1	31	24
Pennsylvania	684	503	162	2	17	37
Virginia	256	215	35	2	4	9
West Virginia	76	61	15	---	---	2
Great Lakes--Total	3,065	2,655	299	6	105	113
Illinois	891	751	130	---	10	51
Indiana	325	291	34	---	---	7
Michigan	413	384	19	2	8	14
Minnesota	468	387	15	1	65	13
Ohio	586	487	90	2	7	21
Wisconsin	382	355	11	1	15	7
New England--Total	536	347	117	6	65	25
Connecticut	106	54	44	2	6	1
Maine	160	113	6	1	40	6
Massachusetts	137	81	43	1	12	7
New Hampshire	52	39	9	---	4	5
Rhode Island	20	13	5	---	2	3
Vermont	61	47	11	2	1	3
Northwest--Total	867	694	151	5	17	17
Idaho	194	176	15	---	3	1
Oregon	308	244	57	4	3	2
Washington	365	274	79	1	11	14
Pacific--Total	69	55	14	---	---	---
Hawaii	54	40	14	---	---	2
N. Mariana Islands	4	4	---	---	---	---
South Pacific **	11	11	---	---	---	---
Rocky Mountain--Total	1,049	933	105	6	5	14
Colorado	301	220	73	4	4	6
Montana	177	172	5	---	---	2
North Dakota	221	218	3	---	---	5
South Dakota	153	147	5	1	---	1
Utah	100	85	13	1	1	---
Wyoming	97	91	6	---	---	---
Southern--Total	1,765	1,481	253	5	26	44
Alabama	156	135	21	---	---	3
Florida	458	345	94	1	18	13
Georgia	283	240	36	2	1	8
Kentucky	112	95	17	---	---	1
Mississippi	165	155	10	---	---	1
North Carolina	271	246	23	---	2	9
Puerto Rico	32	17	14	---	1	---
South Carolina	127	119	8	---	---	6
Tennessee	155	123	29	2	1	3
Virgin Islands	6	2	1	---	3	---
Southwest--Total	2,227	1,902	289	4	32	54
Arkansas	167	164	1	---	2	3
Louisiana	291	175	95	---	21	7
New Mexico	145	133	11	---	1	3
Oklahoma	292	276	15	---	1	6
Texas	1,332	1,154	167	4	7	35
Western--Total	1,148	843	282	2	16	35
Arizona	210	179	28	3	---	9
California	819	564	237	3	15	22
Nevada	119	100	17	1	1	4

* Excludes Puerto Rico, Virgin Islands, N. Mariana Islands, and South Pacific.

** American Samoa, Guam and Trust Territories.

TABLE 3.3

U.S. CIVIL AND JOINT-USE AIRPORTS, HELIPORTS, STOLPORTS, AND SEAPLANE BASES
ON RECORD BY TYPE OF OWNERSHIP
DECEMBER 31, 1979

FAA REGION AND STATE	TOTAL FACILITIES	BY OWNERSHIP		PAVED AIRPORTS		UNPAVED AIRPORTS	
		PUBLIC	PRIVATE	LIGHTED	NOT LIGHTED	LIGHTED	NOT LIGHTED
TOTAL	14,746	4,761	9,985	3,711	1,907	920	8,208
UNITED STATES--TOTAL*	14,697	4,732	9,961	3,695	1,886	919	8,193
ALASKAN--TOTAL	734	521	213	46	18	54	616
CENTRAL--TOTAL	1,325	450	875	374	76	144	731
IOWA	258	116	142	94	12	53	99
KANSAS	374	126	248	98	18	42	216
MISSOURI	374	115	259	112	32	26	204
NEBRASKA	319	93	226	70	14	23	212
EASTERN--TOTAL	1,961	306	1,655	407	297	117	1,140
DELAWARE	35	3	32	6	6	10	13
DISTRICT OF COLUMBIA	18	8	10	6	8	---	4
MARYLAND	144	23	121	37	25	9	73
NEW JERSEY	266	30	236	48	53	14	151
NEW YORK	482	74	408	99	72	33	278
PENNSYLVANIA	684	80	604	111	89	39	445
VIRGINIA	256	60	196	70	28	9	149
WEST VIRGINIA	76	28	48	30	16	3	27
GREAT LAKES--TOTAL	3,065	681	2,384	630	183	270	1,982
ILLINOIS	891	96	795	105	52	64	670
INDIANA	325	72	253	85	22	33	185
MICHIGAN	413	134	279	117	23	49	224
MINNESOTA	468	147	321	93	10	39	326
OHIO	586	129	457	133	60	57	336
WISCONSIN	382	103	279	97	16	28	241
NEW ENGLAND--TOTAL	536	139	397	129	107	9	291
CONNECTICUT	106	15	91	27	32	1	46
MAINE	160	48	112	26	15	4	115
MASSACHUSETTS	137	32	105	41	38	2	56
NEW HAMPSHIRE	52	16	36	17	13	2	20
RHODE ISLAND	20	8	12	8	3	---	9
VERMONT	61	20	41	10	6	---	45
NORTHWEST--TOTAL	867	338	529	192	148	57	470
IDAHO	194	127	67	37	23	4	130
OREGON	308	91	217	63	55	20	170
WASHINGTON	365	120	245	92	70	33	170
PACIFIC--TOTAL	69	31	38	14	36	2	17
HAWAII	54	18	36	10	31	1	12
N. MARIANA ISLANDS	4	4	---	1	2	---	1
SOUTH PACIFIC**	11	9	2	3	3	1	4
ROCKY MOUNTAIN--TOTAL	1,049	477	572	293	105	85	566
COLORADO	301	87	214	69	49	15	168
MONTANA	177	117	60	64	9	14	90
NORTH DAKOTA	221	98	123	53	9	25	134
SOUTH DAKOTA	153	75	78	39	6	30	78
UTAH	100	58	42	40	21	---	39
WYOMING	97	42	55	28	11	1	57
SOUTHERN--TOTAL	1,765	717	1,048	661	240	94	770
ALABAMA	156	99	57	91	28	3	34
FLORIDA	458	126	332	119	68	31	240
GEORGIA	283	122	161	111	31	10	131
KENTUCKY	112	57	55	48	22	6	36
MISSISSIPPI	165	77	88	69	18	8	70
NORTH CAROLINA	271	80	191	82	22	21	146
PUERTO RICO	32	12	20	10	16	---	6
SOUTH CAROLINA	127	63	64	52	11	12	52
TENNESSEE	155	77	78	77	24	3	51
VIRGIN ISLANDS	6	4	2	2	---	---	4
SOUTHWEST--TOTAL	2,227	651	1,576	636	363	61	1,167
ARKANSAS	167	77	90	67	18	6	76
LOUISIANA	291	74	217	70	55	7	159
NEW MEXICO	145	64	81	46	22	1	76
OKLAHOMA	292	131	161	115	31	10	136
TEXAS	1,332	305	1,027	338	237	37	720
WESTERN--TOTAL	1,148	450	698	329	334	27	458
ARIZONA	210	96	114	59	37	9	105
CALIFORNIA	819	295	524	248	277	15	279
NEVADA	119	59	60	22	20	3	74

*EXCLUDES PUERTO RICO, VIRGIN ISLANDS, N. MARIANA ISLANDS, AND SOUTH PACIFIC.

**AMERICAN SAMOA, GUAM AND TRUST TERRITORIES.

TABLE 3.4

U.S. CIVIL AND JOINT-USE AIRPORTS, STOLPORTS, AND SEAPLANE BASES
ON RECORD BY LENGTH OF LONGEST RUNWAY, BY FAA REGION AND STATE: DECEMBER 31, 1979

FAA Region and State	Total	Under 3,000	3,000-3,999	4,000-4,999	5,000-5,999	6,000-6,999	7,000-7,999	8,000-8,999	9,000-9,999	10,000- & over
Total	14,746	9,385	2,603	1,064	782	308	169	108	65	262
United States--total*	14,693	9,356	2,600	1,061	777	305	166	107	63	259
Alaskan--total	734	402	72	66	66	21	13	11	4	79
Central--total	1,325	924	262	61	29	19	13	6	2	9
Iona	258	175	56	15	2	5	1	2	1	1
Kansas	374	262	70	16	13	2	8	1	---	2
Missouri	374	270	69	11	10	6	2	1	---	5
Nebraska	319	217	67	19	4	6	2	2	1	1
Eastern--total	1,961	1,545	198	69	66	24	14	10	8	27
Delaware	35	29	2	2	1	---	1	---	---	---
District of Columbia	18	16	---	---	---	1	---	---	---	1
Maryland	144	117	16	6	3	---	---	1	1	---
New Jersey	266	224	21	4	11	---	2	1	1	2
New York	482	349	54	21	19	8	5	3	4	19
Pennsylvania	684	577	52	20	16	7	3	2	2	5
Virginia	256	185	40	12	11	4	1	3	---	---
West Virginia	76	48	13	4	5	4	2	---	---	---
Great Lakes--total	3,065	2,273	457	120	97	47	22	16	10	43
Illinois	891	782	65	14	12	9	3	3	---	3
Indiana	325	238	51	16	10	4	2	1	2	1
Michigan	413	276	80	15	19	11	6	---	1	5
Minnesota	468	286	88	18	29	11	5	3	2	26
Ohio	586	429	87	38	18	6	1	3	3	1
Wisconsin	382	262	66	19	9	6	5	6	2	7
New England--total	536	373	50	30	38	12	8	3	2	20
Connecticut	106	89	3	6	5	---	1	---	1	1
Maine	160	91	16	14	11	7	3	1	---	17
Massachusetts	137	97	15	6	12	2	2	1	1	1
New Hampshire	52	33	9	---	6	2	1	---	---	1
Rhode Island	20	13	2	2	1	1	---	1	---	---
Vermont	61	50	5	2	3	---	1	---	---	---
Northwest--total	867	597	122	65	47	11	6	1	5	13
Idaho	194	101	43	29	13	2	1	---	3	2
Oregon	308	224	36	21	14	7	1	1	---	4
Washington	365	272	43	15	20	2	4	---	2	7
Pacific--total	69	46	4	3	4	6	1	1	3	1
Hawaii	54	42	3	2	2	3	---	---	1	1
N. Mariana Islands	4	1	---	---	1	1	---	1	---	---
South Pacific**	11	3	1	1	1	2	---	---	2	---
Rocky Mountain--total	1,049	481	250	151	82	32	22	13	8	10
Colorado	301	137	56	50	30	10	6	7	1	4
Montana	177	62	67	25	12	2	--	2	4	3
North Dakota	221	148	51	12	4	2	2	1	1	---
South Dakota	153	92	35	16	2	5	2	1	---	---
Utah	100	17	22	26	20	7	5	---	1	2
Wyoming	97	25	19	22	14	6	7	2	1	1
Southern--total	1,765	912	449	165	126	42	29	21	10	16
Alabama	156	98	47	24	13	5	2	4	2	1
Florida	458	263	79	42	33	15	8	7	1	10
Georgia	283	146	80	22	25	4	1	3	1	1
Kentucky	112	69	20	10	6	5	1	---	1	---
Mississippi	165	66	66	16	8	3	2	3	1	---
North Carolina	271	155	70	25	8	6	5	1	---	1
Puerto Rico	32	24	2	1	3	---	--	---	---	2
South Carolina	127	56	41	8	15	2	2	1	2	---
Tennessee	155	73	44	16	15	2	1	2	2	---
Virgin Islands	6	2	---	1	---	---	2	---	---	1
Southwest--total	2,227	1,195	552	207	151	48	29	13	8	24
Arkansas	167	86	46	11	14	8	1	1	---	---
Louisiana	291	176	67	14	14	5	3	1	1	10
New Mexico	145	30	24	31	34	10	10	2	---	4
Oklahoma	292	163	82	18	17	4	3	1	2	2
Texas	1,332	740	333	133	72	21	12	8	5	8
Western--total	1,148	637	207	127	76	46	17	13	5	20
Arizona	210	74	48	47	19	10	6	3	---	3
California	819	525	145	58	37	24	6	6	3	15
Nevada	139	38	14	22	20	12	5	4	2	2

*Excludes Puerto Rico, Virgin Islands, N. Mariana Islands, and South Pacific.

**American Samoa, Guam and Trust Territories.

TABLE 3.5

U.S. CIVIL AND JOINT-USE AIRPORTS, HELIPORTS, STOLPORTS, AND SEAPLANE BASES ON RECORD
BY FAA REGION AND STATE AND OTHER AREAS: DECEMBER 31, 1970 THROUGH 1979

FAA REGION AND STATE	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
TOTAL	11,261	12,070	12,405	12,700	13,062	13,251	13,770	14,117	14,574	14,746
UNITED STATES--TOTAL*	11,226	12,028	12,362	12,656	13,019	13,207	13,728	14,069	14,525	14,693
ALASKAN--TOTAL	708	762	766	766	766	769	762	763	756	734
CENTRAL--TOTAL	1,051	1,125	1,159	1,197	1,205	1,198	1,243	1,274	1,322	1,325
IOWA	236	241	244	246	248	241	250	253	257	258
KANSAS	270	295	307	315	314	318	334	351	372	374
MISSOURI	286	313	319	341	346	343	358	365	371	374
NEBRASKA	259	276	289	295	297	296	301	305	322	319
EASTERN--TOTAL	1,418	1,505	1,543	1,631	1,729	1,776	1,860	1,906	1,976	1,961
DELAWARE	26	25	30	30	32	32	32	32	32	35
DISTRICT OF COLUMBIA	6	7	7	9	14	16	16	17	17	18
MARYLAND	81	91	99	107	123	128	135	142	148	144
NEW JERSEY	184	189	192	207	222	222	239	254	263	266
NEW YORK	414	444	442	465	478	488	496	490	498	482
PENNSYLVANIA	475	511	514	541	579	609	644	651	692	684
VIRGINIA	185	192	209	220	227	230	240	249	255	256
WEST VIRGINIA	47	46	50	52	54	51	58	71	71	76
GREAT LAKES--TOTAL	2,048	2,258	2,419	2,490	2,594	2,620	2,772	2,832	3,011	3,065
ILLINOIS	599	652	748	773	829	831	867	876	901	891
INDIANA	179	199	208	220	232	237	293	306	317	325
MICHIGAN	305	376	383	401	403	400	421	413	418	413
MINNESOTA	262	266	276	279	295	301	312	336	420	468
OHIO	447	491	522	536	543	548	558	569	584	586
WISCONSIN	256	274	281	281	292	303	321	332	371	382
NEW ENGLAND--TOTAL	445	463	457	481	512	529	547	542	540	536
CONNECTICUT	78	86	79	83	91	91	104	103	104	106
MAINE	139	148	153	155	158	161	162	162	157	160
MASSACHUSETTS	118	116	117	125	131	139	141	139	140	137
NEW HAMPSHIRE	52	54	46	50	56	58	57	54	55	52
RHODE ISLAND	14	14	15	17	17	18	22	24	23	20
VERMONT	44	45	47	51	59	62	61	60	61	61
NORTHWEST--TOTAL	627	680	685	712	743	765	807	841	857	867
IDAHO	166	169	169	170	174	181	187	190	190	194
OREGON	221	255	258	264	273	277	286	301	302	308
WASHINGTON	240	256	258	278	296	307	334	350	365	365
PACIFIC--TOTAL	70	69	60	59	60	62	66	68	72	69
HAWAII	59	58	48	46	47	47	51	53	56	54
N. MARIANA ISLANDS	---	---	---	---	---	---	---	---	4	4
SOUTH PACIFIC**	11	11	12	13	13	15	15	16	12	11
ROCKY MOUNTAIN--TOTAL	846	871	869	872	895	898	947	961	992	1,049
COLORADO	209	217	214	220	228	230	255	261	272	301
MONTANA	179	180	176	167	168	167	172	169	172	177
NORTH DAKOTA	184	191	193	194	196	198	209	211	217	221
SOUTH DAKOTA	113	114	114	115	124	125	131	134	142	153
UTAH	81	85	87	92	93	90	90	93	95	100
WYOMING	80	84	85	84	86	88	90	93	94	97
SOUTHERN--TOTAL	1,297	1,365	1,397	1,409	1,436	1,474	1,555	1,666	1,719	1,765
ALABAMA	128	130	128	127	126	129	131	142	147	156
FLORIDA	291	323	329	332	341	355	391	438	454	458
GEORGIA	202	218	231	232	236	248	262	275	278	283
KENTUCKY	60	73	76	80	81	87	90	97	101	112
MISSISSIPPI	152	130	134	138	141	145	148	154	160	165
NORTH CAROLINA	210	231	228	227	236	237	251	258	270	271
PUERTO RICO	20	27	27	27	26	25	23	27	27	32
SOUTH CAROLINA	113	116	120	120	117	116	123	126	126	127
TENNESSEE	100	113	120	122	128	128	132	144	150	155
VIRGIN ISLANDS	4	4	4	4	4	4	4	4	5	6
WESTERN--TOTAL	1,047	1,059	1,064	1,063	1,076	1,080	1,124	1,140	1,198	1,198
ARIZONA	215	209	198	196	196	196	202	209	210	210
CALIFORNIA	730	746	754	753	769	781	804	813	819	819
NEVADA	102	104	112	114	111	113	118	118	119	119
SOUTHWEST--TOTAL	1,704	1,913	1,986	2,020	2,046	2,070	2,087	2,123	2,227	2,227
ARKANSAS	144	151	155	161	161	165	166	167	167	167
LOUISIANA	221	240	260	278	286	281	280	282	291	291
NEW MEXICO	127	129	131	134	134	134	139	139	145	145
OKLAHOMA	230	265	273	278	273	277	285	285	292	292
TEXAS	982	1,178	1,167	1,169	1,192	1,213	1,217	1,250	1,332	1,332

*EXCLUDES PUERTO RICO, VIRGIN ISLANDS, N. MARIANA ISLANDS, AND SOUTH PACIFIC.

**AMERICAN SAMOA, GUAM AND TRUST TERRITORIES.

TABLE 3.6

AIRPORT DEVELOPMENT AND PROGRAM STATUS AS OF DECEMBER 31, 1979

FAA Region and State	Air Carrier			General Aviation		
	Total Federal Funds (000)	Total Airports	Total Projects	Total Federal Funds (000)	Total Airports	Total Projects
Total	$3,057,889	704	3,595	$488,260	1,146	1,885
United States--Total*	2,960,546	691	3,529	487,560	1,144	1,883
Alaskan--Total	168,443	67	130	21,472	11	26
Central--Total	143,043	52	240	39,218	106	139
Iowa	29,387	13	51	6,315	21	29
Kansas	32,070	16	53	7,340	24	29
Missouri	41,546	9	58	17,707	31	42
Nebraska	40,041	14	78	7,856	30	39
Eastern--Total	410,617	78	526	62,881	102	206
Delaware	3,788	1	8	952	1	4
Maryland	21,438	4	23	6,039	9	15
New Jersey	46,114	7	55	11,322	8	25
New York	145,980	23	182	17,609	27	66
Pennsylvania	117,526	22	131	12,838	27	38
Virginia	43,229	12	75	8,570	20	38
West Virginia	32,542	9	52	5,551	10	20
Great Lakes--Total	426,267	107	452	84,522	168	250
Illinois	115,558	26	105	16,050	35	63
Indiana	53,876	13	52	23,983	25	37
Michigan	100,272	24	107	14,099	27	37
Minnesota	40,593	16	64	9,972	31	33
Ohio	61,818	14	56	12,096	19	38
Wisconsin	56,150	14	68	8,322	31	42
New England--Total	85,121	35	213	17,392	55	122
Connecticut	15,982	5	34	2,741	5	15
Maine	15,707	8	59	3,555	19	30
Massachusetts	34,846	10	68	7,391	19	59
New Hampshire	6,012	4	24	1,477	6	12
Rhode Island	7,687	4	8	1,469	1	1
Vermont	4,887	4	20	759	5	10
Northwest--Total	133,090	37	179	25,146	69	126
Idaho	21,077	9	47	5,153	18	30
Oregon	51,285	11	58	8,938	25	40
Washington	60,728	17	74	11,055	26	56
Pacific--Total	126,106	16	76	536	2	2
Hawaii	92,019	8	41	536	2	2
N. Mariana Islands	---	---	---	---	---	---
South Pacific**	34,087	8	35	---	---	---
Rocky Mountain--Total	234,458	61	327	43,174	105	149
Colorado	87,831	15	70	17,108	18	35
Montana	35,001	15	80	5,802	23	25
North Dakota	24,211	7	42	5,256	18	23
South Dakota	26,305	9	66	4,876	15	18
Utah	34,960	5	25	5,950	17	26
Wyoming	26,150	10	44	4,182	14	22
Southern--Total	598,011	108	603	78,485	227	352
Alabama	36,963	11	60	9,285	19	31
Florida	158,353	29	153	14,728	37	70
Georgia	116,162	12	62	12,369	42	52
Kentucky	39,475	7	58	6,816	15	23
Mississippi	30,759	12	60	8,964	42	64
North Carolina	68,822	13	79	12,290	27	53
Puerto Rico	19,773	3	17	691	2	2
South Carolina	23,820	8	28	6,509	21	29
Tennessee	60,401	11	72	6,833	22	28
Virgin Islands	43,483	2	14	---	---	---
Southwest--Total	384,402	78	527	68,055	199	330
Arkansas	23,975	10	70	6,449	24	41
Louisiana	79,902	10	85	6,976	16	26
New Mexico	18,662	11	78	9,390	19	39
Oklahoma	49,651	13	81	8,822	51	79
Texas	212,212	34	213	36,418	89	145
Western--Total	348,331	65	322	47,379	102	178
Arizona	61,232	13	57	9,217	21	30
California	246,260	48	237	33,300	68	128
Nevada	40,839	4	28	4,862	13	20

*Excludes Puerto Rico, Virgin Islands, N. Mariana Islands, and South Pacific.

**American Samoa, Guam and Trust Territories.

IV. AIRPORT ACTIVITY

The data presented in this chapter were obtained from quarterly reports submitted to the Civil Aeronautics Board (CAB) by the certificated route air carriers on Schedule T-3 (a) (b) (c), Airport Activity Statistics--Revenue Service. These statistics summarize revenue; passenger enplanements; aircraft departures; and tons of freight, express, and mail enplaned at the 644 certificated points in the 50 States, the District of Columbia, and other U.S. areas designated by the Federal Aviation Administration (FAA) receiving scheduled and nonscheduled service during calendar year 1979. Effective January 1, 1970, in accordance with CAB's stated definition for "Domestic Operations," operations between the 48 conterminous States, Alaska, and Hawaii have been reclassified as domestic.

Air traffic hubs are not airports; they are the cities and Standard Metropolitan Statistical Areas (SMSA) requiring aviation services. An SMSA is a county that contains at least one city of 50,000 population, or twin cities with a combined population of at least 50,000, plus any contiguous counties that are metropolitan in character and have similar economic and social relationships. These metropolitan areas constitute a primary focal point for the transportation research programs of the FAA, and the analyses of individual cities within an area are treated in relationship to the entire area. In those instances where two or more individually certificated communities are located in an SMSA, those communities are grouped under the SMSA definition throughout this publication.

Individual communities fall into four hub classifications as determined by each community's percentage of the total enplaned revenue passengers

in all services and all operations of U.S. certificated route air carriers within the 50 States, the District of Columbia, and other U.S. areas designated by the FAA. Classifications in this issue are based on 299,034,463 total enplaned revenue passengers.

The percentage and number of enplaned passengers in the hub classifications for calendar year 1979 are:

Hub Classification	Percentage of Total Enplaned Passengers	Number of Enplaned Passengers
Large (L)	1.00 or more	2,990,345 or more
Medium (M)	0.25 to 0.99	747,586 to 2,990,344
Small (S)	0.05 to 0.24	149,517 to 747,585
Nonhub (N)	less than 0.05	less than 149,516

For the 12-month period ending December 31, 1979, there were 147 air traffic hubs. These hubs represented 22.8 percent of the 644 certificated points in the 50 States, the District of Columbia, and other U.S. areas receiving air carrier service during the period. The dominance of the hubs in the air traffic patterns is brought out by the fact that of the 299,034,463 passenger enplanements during the period, 96.1 percent (289,872,472) were recorded at the 147 hubs, while the nonhubs accounted for only 3.9 percent (9,161,991). Of the 96.1 percent of the passenger enplanements recorded at the hubs, the 27 large hubs accounted for 71.1 percent, the 37 medium hubs accounted for 16.5 percent, and the 83 small hubs accounted for 8.6 percent.

Beginning in 1971, data for passenger enplanements included enplaned passengers in both domestic and international, and scheduled and nonscheduled service of the certificated route air carriers, for all types of aircraft for the 50 States, the District of Columbia, and other U.S. areas designated by the FAA.

AIR TRAFFIC HUBS

December 31, 1979

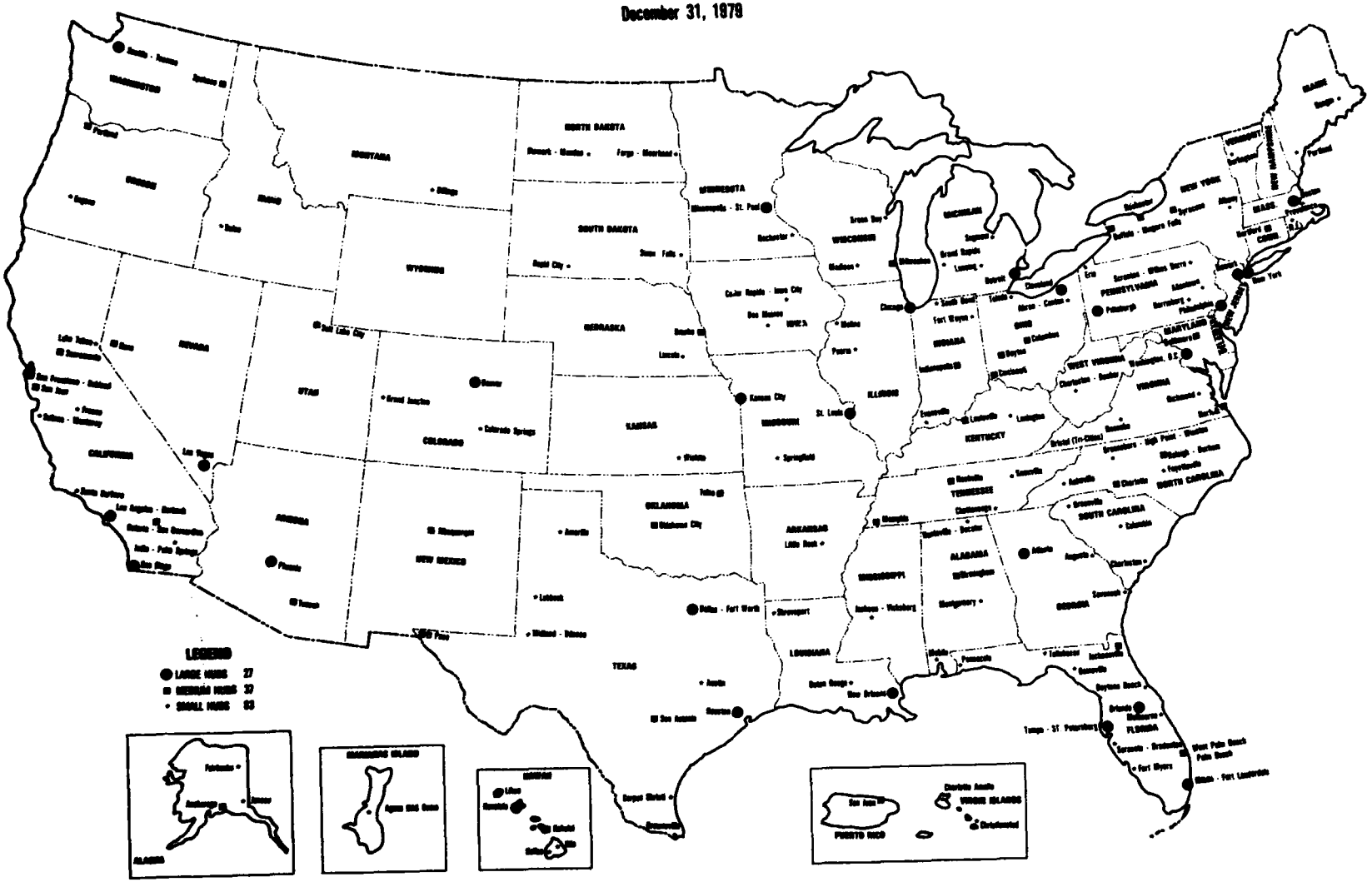


TABLE 4.1

CERTIFICATED ROUTE AIR CARRIERS
DECEMBER 31, 1979

Air California	Imperial Airlines*
Air Florida*	Kodiak-Western Alaska Airlines
Airlift International	Mackey International
Air Micronesia	Midway Airlines
Air Midwest	Midway (Southwest) Airlines
Air New England	Mississippi Valley Airlines*
Air Wisconsin	Munz Northern Airlines
Alaska Airlines	National Airlines
Allegheny Airlines	New York Airways
Aloha Airlines	Northwest Airlines
Altair Airlines	Ozark Air Lines
American Airlines	Pacific Southwest Airlines*
Apollo Airways*	Pan American World Airways
Aspen Airways	Piedmont Aviation
Braniff Airways	Republic Airlines**
Capitol International Airways	Reeve Aleutian Airways
Chicago Helicopter Airways	Seaboard World Airlines
Cochise Airlines	Sky West Aviation
Colonial Airlines	Southeast Airlines*
Continental Air Lines	Southwest Airlines
Delta Air Lines	Swift Aire Lines
DHL Airways	Texas International Airlines
Eastern Air Lines	Trans Carib Air
Empire Airlines*	Trans International Airlines
Evergreen International Airlines*	Trans World Airlines
	United Air Lines
Flying Tiger Line	U. S. Air
Frontier Airlines	Western Air Lines
Golden West Airlines	Wien Air Alaska
Hawaiian Airlines	World Airways
Hughes Air Corp.	Wright Airlines

* Carriers Certificated in 1979.
** Merger of North Central Air Lines and Southern Airways.

TABLE 4.2

DOMESTIC AIRLINE TRAFFIC ENPLANED AT U.S. STATIONS
1970 THROUGH 1979*

Year	Air Carrier Aircraft Departures	Number of Enplaned Passengers	Tons of Enplaned Mail	Tons of Enplaned Cargo
1970**	5,001,557	155,938,787	782,229.9	1,926,258.3
1971**	4,680,678	152,291,732	862,939.3	2,075,811.5
1972	4,741,495	172,263,469	852,941.2	2,451,766.5
1973	4,818,587	182,987,738	829,023.4	2,717,932.6
1974	4,452,156	189,316,615	827,270.8	2,599,894.1
1975	4,447,559	188,495,858	825,563.2	2,356,691.3
1976	4,597,522	206,664,841	895,081.0	2,483,597.9
1977	4,781,923	229,344,987(R)	997,473.3	3,031,518.1
1978	4,844,426	261,313,500	1,043,564.5	3,244,108.8
1979	5,094,736	296,132,661	1,071,071.8	3,122,796.4

*These data include domestic all-cargo figures which are shown in Table 4.6.
**Fiscal year data.
(R)Revised.

NOTE: Commencing 1971 and subsequent years, data include scheduled and nonscheduled operations.

Source: CAB-FAA "Airport Activity Statistics of Certificated Route Air Carriers."

TABLE 4.3

AMERICAN FLAG AIRLINE TRAFFIC ENPLANED AT TERRITORIAL
U.S. STATIONS: 1970 THROUGH 1979

Year	Air Carrier Aircraft Departures	Number of Enplaned Passengers	Tons of Enplaned Mail	Tons of Enplaned Cargo
1970*	42,941	2,331,797	4,792.9	44,719.9
1971*	39,445	2,192,217	3,714.3	32,199.1
1972	41,495	2,524,395	4,310.1	37,397.2
1973	46,080	2,622,340	5,109.1	40,548.0
1974	35,906	2,601,804	5,639.3	45,922.6
1975	30,485	2,243,793	5,807.0	47,394.0
1976	28,559	2,258,714	5,551.2	48,329.3
1977	27,511	2,358,039	6,212.7	55,971.6
1978	29,040	2,713,246	5,919.4	59,188.7
1979	31,388	2,901,802	5,660.7	60,788.0

*Fiscal year data.

NOTE: Commencing 1971 and subsequent years, data include scheduled and nonscheduled operations.

Source: CAB-FAA "Airport Activity Statistics of Certificated Route Air Carriers."

TABLE 4.4

DOMESTIC HELICOPTER TRAFFIC ENPLANED AT U.S. STATIONS
1970 THROUGH 1979

Year	Air Carrier Aircraft Departures	Number of Enplaned Passengers	Tons of Enplaned Mail	Tons of Enplaned Cargo
1970*	93,298	620,945	574.2	1,396.8
1971*	79,518	544,368	302.8	963.2
1972	79,979	588,288	200.5	969.2
1973	83,152	614,952	154.7	737.9
1974	80,743	591,830	163.5	418.3
1975	67,923	505,827	201.7	210.3
1976	54,123	443,651	109.0	148.8
1977	35,305	268,023	81.1	52.3
1978	31,779	282,539	54.9	53.5
1979	0	0	0	0

*Fiscal year data.

NOTE: Commencing 1971 and subsequent years, data include scheduled and nonscheduled operations. No helicopter carriers operated during 1979.

Source: CAB-FAA "Airport Activity Statistics of Certificated Route Air Carriers."

TABLE 4.5

AMERICAN FLAG AIRLINE TRAFFIC ENPLANED AT FOREIGN STATIONS:
1970 THROUGH 1979*

Year	Air Carrier Aircraft Departures	Number of Enplaned Passengers	Tons of Enplaned Mail	Tons of Enplaned Cargo
1970**	188,188	8,886,734	56,003.4	203,979.4
1971**	229,164	11,852,243	80,457.5	293,380.1
1972	223,865	12,357,957	61,506.7	361,157.3
1973	224,793	12,614,201	70,614.1	366,634.1
1974	203,980	11,787,449	68,958.2	367,988.3
1975	189,918	10,908,448	62,206.1	363,510.7
1976	183,431	11,575,637	62,557.5	390,220.0
1977	178,711	12,319,732	62,314.1	384,406.4
1978	174,416	13,556,828	57,401.5	386,444.9
1979	181,857	15,422,473	54,902.0	400,667.0

*Includes operations of certificated all-cargo carriers.
**Fiscal year data.

NOTE: Commencing 1971 and subsequent years, data include scheduled and nonscheduled operations.

Source: CAB-FAA "Airport Activity Statistics of Certificated Route Air Carriers."

TABLE 4.6

DOMESTIC ALL-CARGO AIRLINE TRAFFIC ENPLANED AT U.S. STATIONS
1970 THROUGH 1979*

Year	Air Carrier Aircraft Departures	Number of Enplaned Passengers	Tons of Enplaned Mail	Tons of Enplaned Cargo
1970**	12,046	---	4,162.5	116,179.2
1971**	11,360	---	8,823.7	150,970.7
1972	11,790	---	6,993.3	217,611.8
1973	15,658	845	16,590.9	306,601.8
1974	16,351	440	16,086.5	321,405.3
1975	13,959	1,641	10,021.6	284,131.9
1976	13,594	---	8,466.7	285,333.4
1977	16,008	---	9,525.8	332,200.2
1978	23,029	---	17,443.3	495,296.0
1979	23,135	235	14,614.2	574,185.3

*These data are included in Table 4.2.

**Fiscal year data.

NOTE: Commencing 1971 and subsequent years, data include scheduled and nonscheduled operations.

Source: CAB-FAA "Airport Activity Statistics of Certificated Route Air Carriers."

TABLE 4.7
AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS, AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS, ALL SERVICES AT LARGE AIR TRAFFIC HUBS
12 MONTHS ENDED DECEMBER 31, 1979

Line No.	Community (Airport Name) Percent of Enplanements	Aircraft departures			Enplaned passengers	Enplaned revenue tons				
		Total performed	Scheduled	Scheduled completed		Freight	Express	U.S. Mail		Foreign mail
								Priority	Nonpriority	
	1	2	3	4	5	6	7	8	9	10
1	ATLANTA, GEORGIA									
2	(WILLIAM B HARTSFIELD INT'L)									
3	6.95	259703	266455	257344	20797535	158909.02	8197.04	64328.75	54.77	
4										
5	BOSTON, MASSACHUSETTS									
6	(LOGAN INTERNATIONAL)									
7	2.37	96390	96315	93179	7093394	87712.00	1342.13	21111.02	5443.75	7.99
8										
9	CHICAGO, ILLINOIS									
10	(MIDWAY)									
11	0.01	916	933	908	59160	29.33	2.75	3.42		
12	(O'HARE INTERNATIONAL)									
13	7.06	281169	291732	277397	21119362	383395.20	8702.76	68020.87	23442.31	
14										
15	COMMUNITY TOTAL									
16	7.07	282085	292665	278305	21178522	383424.53	8705.51	68024.29	23442.31	
17										
18	CLEVELAND, OHIO									
19	(BURKE LAKEFRONT)									
20	0.02	3057	3137	3042	73118					
21	(HOPKINS INTERNATIONAL)									
22	1.23	63984	65296	63392	3693940	39581.53	2424.38	10704.43	1014.39	
23										
24	COMMUNITY TOTAL									
25	1.25	67041	68433	66434	3767058	39581.53	2424.38	10704.43	1014.39	
26										
27	DALLAS-FORT WORTH, TEXAS									
28	(LOVE FIELD)									
29	0.16	6906	7129	6889	495345					
30	(DALLAS-FT.WORTH REGIONAL)									
31	3.65	162481	164034	161292	10924120	96808.37	1507.45	42712.48	305.61	18.43
32										
33	COMMUNITY TOTAL									
34	3.81	169387	171163	168181	11419465	96808.37	1507.45	42712.48	305.61	18.43
35										
36	DENVER, COLORADO									
37	(STAPLETON INTERNATIONAL)									
38	3.22	148148	150644	146680	9654132	57361.43	629.85	24319.95	2144.22	.09
39										
40	DETROIT&ANN ARBOR, MICHIGAN									
41	(DETROIT CITY)									
42	0.01	1436	1475	1422	38633					
43	(DETROIT METROPOLITAN WAYNE CTY)									
44	1.83	90913	92419	89525	5485997	104338.68	925.04	20293.64	3730.64	
45	(WILLOW RUN)									
46	0.00	1			7					
47										
48	COMMUNITY TOTAL									
49	1.84	92350	93894	90947	5524637	104338.68	925.04	20293.64	3730.64	
50										
51	HONOLULU, OAHU, HAWAII									
52	(HICKAM AFB)									
53	0.11	4248	4718	3446	350283	621.35		319.54	344.56	
54	(HONOLULU INTERNATIONAL)									
55	1.96	48189	49976	43456	5874874	77013.58	223.95	13755.76	6136.26	819.71
56										
57	COMMUNITY TOTAL									
58	2.07	52437	54694	46902	6225159	77634.93	223.95	14075.32	6480.82	819.71
59										
60	HOUSTON, TEXAS									
61	(HOUSTON INTERCONTINENTAL)									
62	1.72	84090	84405	82850	5153506	51998.85	578.73	14560.16	2118.05	34.84
63	(WILLIAM P HOBBY)									
64	0.15	6738	7043	6693	463608	55.82	.02	.54	.01	
65										
66	COMMUNITY TOTAL									
67	1.87	90828	91448	89543	5617114	52052.67	578.75	14560.70	2118.06	34.84
68										
69	KANSAS CITY, MISSOURI									
70	(INTERNATIONAL)									
71	1.04	64412	64942	63672	3133092	17241.19	312.94	16013.44	788.16	
72	(KANSAS CITY MUNI)									
73	0.00	1								
74										
75	COMMUNITY TOTAL									
76	1.04	64413	64942	63672	3133092	17241.19	312.94	16013.44	788.16	
77										
78	LAS VEGAS, NEVADA									
79	(MC CARRAN INTL)									
80	1.58	62076	59846	58579	4739343	4024.49	92.91	2077.56	20.44	
81										
82	LOS ANGELES/BURBANK/LNG.BCH.CAL									
83	(HOLLYWOOD-BURBANK)									
84	0.39	16516	16563	16046	1193580	3332.18	19.67	1.45		
85	(LONG BEACH)									
86	0.05	1881	1880	1837	168469	49.27	.01	.13		
87	(LOS ANGELES INTERNATIONAL)									
88	5.31	190813	192044	186992	15901806	332891.56	6508.65	44198.99	14710.84	12.97
89	(ORANGE COUNTY)									
90	0.42	26101	26804	24407	1279200	1148.02	20.80	.55		
91	(VAN NUYS AIRPORT)									
92	0.00	2			15					
93										
94	COMMUNITY TOTAL									
95	6.17	235313	236491	229282	18543070	337415.03	6549.13	44201.16	14710.84	12.97
96										
97	MIAMI/FT LAUDERDALE,FLORIDA									
98	(FT. LAUDERDALE-HOLLYWOOD INTL)									
99	0.97	42692	42704	41123	2911520	9010.05	235.42	3149.18	69.35	
100	(MIAMI INTERNATIONAL)									
101	2.52	94994	91859	88802	7564728	129127.13	928.88	16677.01	2416.75	114.85
102										
103	COMMUNITY TOTAL									
104	3.49	137686	134563	129925	10476248	138137.18	1164.30	19822.23	2486.10	114.85
105										
106	MINNEAPOLIS/ST. PAUL,MINNESOTA									
107	(MINNEAPOLIS-ST PAUL INTL)									
108	1.57	75052	75809	73389	4697295	50942.73	751.85	19694.58	3388.41	
109										
110	NEWARK, NEW JERSEY									
111	(NEWARK)									
112	1.48	58021	58776	57139	4435403	36124.29	1283.69	14707.34	7088.00	

TABLE 4.7
AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS, AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS, ALL SERVICES AT LARGE AIR TRAFFIC HUBS

12 MONTHS ENDED DECEMBER 31, 1979

Line No.	Community (Airport Name) Percent of Enplanements	Aircraft departures			Enplaned passengers	Enplaned revenue tons				
		Total performed	Scheduled	Scheduled completed		Freight	Express	U.S. Mail		Foreign mail
								Priority	Nonpriority	
	1	2	3	4	5	6	7	8	9	10
1	NEW ORLEANS, LOUISIANA									
2	(INTERNATIONAL/MOISANT FIELD)									
3	1.04	52026	52834	51620	3137699	13019.34	333.87	6120.99	176.82	
4										
5	NEW YORK, NEW YORK									
6	(JOHN F KENNEDY INTL)									
7	3.07	87730	86860	83347	9194746	411690.25	2267.91	57826.70	22972.83	9.27
8	(LA GUARDIA)									
9	3.03	116040	112008	108211	9074517	23476.96	1462.82	23429.19	3978.75	
10										
11	COMMUNITY TOTAL									
12	6.10	203770	198868	191558	18269263	435167.21	3750.73	81255.89	26951.58	9.27
13										
14	ORLANDO, FLORIDA									
15	(MCCOY AFB)									
16	1.03	48581	48921	47572	3098437	21977.58	226.94	3478.59	35.02	
17										
18	PHILADELPHIA,PA/CAMDEN,NJ									
19	(INTERNATIONAL)									
20	1.51	74639	76704	73521	4528807	52136.13	1183.67	18480.80	6559.68	
21										
22	PHOENIX, ARIZONA									
23	(PHOENIX SKY HARBOR INTL)									
24	1.19	60885	61617	60179	3587529	15920.50	291.21	6043.76	1825.83	
25										
26	PITTSBURGH,PA/WHEELING W VA									
27	(GREATER PITTSBURGH)									
28	1.76	93187	94961	92487	5280953	16825.40	661.93	14946.95	1877.69	
29										
30	ST. LOUIS, MISSOURI									
31	(LAMBERT-ST LOUIS MUNI)									
32	1.86	98786	103546	97855	5582691	26352.43	400.68	20278.90	1440.83	
33										
34	SAN DIEGO, CALIFORNIA									
35	(SAN DIEGO INTNL-LINDBERGH FLD)									
36	1.10	41417	42045	41125	3301759	10095.81	175.69	5203.39	5.14	
37										
38	SAN FRANCISCO/OAKLAND, CAL.									
39	(OAKLAND METROPOLITAN INTL)									
40	0.44	19952	20065	19385	1327093	1317.59	25.62	1491.13		
41	(SAN FRANCISCO INTL)									
42	3.60	120153	120911	118212	10783923	179781.40	3511.30	34070.53	15965.74	1.18
43										
44	COMMUNITY TOTAL									
45	4.04	140105	140976	137597	12111016	181098.99	3536.92	35561.66	15965.74	1.18
46										
47	SEATTLE/TACOMA, WASHINGTON									
48	(BOEING FIELD INTL.)									
49	0.00	122	115	102	807	236.42	.04	2.68	.50	
50	(SEATTLE-TACOMA INTERNATIONAL)									
51	1.58	60972	61979	59720	4736290	110951.80	980.72	19442.87	5402.65	21.95
52										
53	COMMUNITY TOTAL									
54	1.58	61094	62094	59822	4737097	111188.22	980.76	19445.55	5403.15	21.95
55										
56	TAMPA&ST.PTSBG/CLWTR&LKLND,FLA									
57	(TAMPA INTERNATIONAL)									
58	1.23	63444	64199	62878	3693478	15386.09	316.70	7057.03	1029.31	
59										
60	WASHINGTON, DIST. OF COL.									
61	(DULLES INTERNATIONAL)									
62	0.52	25133	25735	24679	1559811	14785.27	138.63	8524.90	10449.09	17.09
63	(WASHINGTON NATIONAL)									
64	2.34	103922	100445	97675	7025494	17150.94	554.33	24611.08	7061.34	
65										
66	COMMUNITY TOTAL									
67	2.86	129055	126180	122354	8585305	31936.21	692.96	33135.98	17510.39	17.09
68										
69	OVER-ALL TOTAL,									
70	LARGE HUBS									
71	71.08	2957919	2987083	2869069	213215901	2572811.92	47196.98	667615.44	154209.98	1094.31
72										
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TABLE 4.8

AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS, AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS, ALL SERVICES AT MEDIUM AIR TRAFFIC HUBS

12 MONTHS ENDED DECEMBER 31, 1979

Line No.	Community (Airport Name) Percent of Enplanements	Aircraft departures			Enplaned passengers	Enplaned revenue tons				
		Total performed	Scheduled	Scheduled completed		Freight	Express	U.S. Mail		Foreign mail
								Priority	Nonpriority	
	1	2	3	4	5	6	7	8	9	10
1	ALBUQUERQUE, NEW MEXICO									
2	(ALBUQUERQUE SUNPRT/KIRTLND AFB)									
3	0.40	24473	24812	24481	1199476	3392.04	17.22	2775.25	198.15	.86
4										
5	ANCHORAGE, ALASKA									
6	(ANCHORAGE INTERNATIONAL)									
7	0.30	18635	17445	16367	906704	111846.40	49.68	15567.46	10026.88	1.93
8	(ELMENDORF AFB)									
9	0.00	8	6	6	452	8.95	.02	.65	2.44	
10										
11	COMMUNITY TOTAL									
12	0.30	18643	17451	16373	907156	111855.35	49.70	15568.11	10029.30	1.93
13										
14	BALTIMORE, MARYLAND									
15	(BALTO/WASH INTL)									
16	0.58	35075	35635	34518	1759614	13726.88	405.69	7215.11	1420.63	
17										
18	BIRMINGHAM, ALABAMA									
19	(BIRMINGHAM MUNI)									
20	0.26	20713	21052	20484	797616	2616.02	117.29	3360.66	46.94	
21										
22	BUFFALO/NIAGARA FALLS, NEW YORK									
23	(GREATER BUFFALO INTERNATIONAL)									
24	0.58	34000	34806	33726	1742871	12061.42	486.96	5304.57	1361.56	
25										
26	CHARLOTTE, NORTH CAROLINA									
27	(DOUGLAS MUNI)									
28	0.52	31298	31839	30986	1359557	17222.78	687.34	6771.53	53.25	
29										
30	CINCINNATI, OHIO									
31	(GREATER CINCINNATI)									
32	0.53	33597	34119	33365	1601087	14311.14	240.53	5344.57	965.37	
33										
34	COLUMBUS, OHIO									
35	(PORT COLUMBUS INTERNATIONAL)									
36	0.46	26263	26483	26033	1383721	5973.23	176.84	4286.10	634.01	
37										
38	DAYTON, OHIO									
39	(JAMES M COX DAYTON MUNI)									
40	0.35	20988	21312	20859	999278	6763.02	205.90	2734.65	119.59	
41										
42	EL PASO, TEXAS									
43	(EL PASO INTERNATIONAL)									
44	0.29	16970	17018	16806	884437	7997.06	131.68	1910.00	.09	
45										
46	HARTFD.CON/SPGFLD&WESTFLD, MASS									
47	(BRADLEY INTL)									
48	0.53	31473	32047	31082	1404360	14036.21	653.92	6574.63	868.00	
49										
50	INDIANAPOLIS, INDIANA									
51	(INDIANAPOLIS MUNI/WEIR-COOK/)									
52	0.57	34528	35638	34252	1709074	13272.56	402.53	8241.94	954.15	
53										
54	JACKSONVILLE, FLORIDA									
55	(JACKSONVILLE INTERNATIONAL)									
56	0.29	18045	16688	16333	896136	2421.29	112.91	4458.48	3.01	
57										
58	KAHULUI, MAUI, HAWAII									
59	(KAHULUI)									
60	0.51	19607	21325	16907	1533756	1786.89		494.44	348.88	
61										
62	LIHUE, KAUAI, HAWAII									
63	(LIHUE)									
64	0.38	12973	13088	10405	1152115	718.37		241.04	245.62	
65										
66	LOUISVILLE, KENTUCKY									
67	(STANDIFORD FIELD)									
68	0.37	29899	30510	29682	1127869	5768.37	230.22	5021.91	.88	
69										
70	MEMPHIS, TENNESSEE									
71	(MEMPHIS INTERNATIONAL)									
72	0.86	64275	66475	64010	2576902	19971.67	481.96	10736.52	159.36	
73										
74	MILWAUKEE, WISCONSIN									
75	(GENERAL MITCHELL FIELD)									
76	0.57	40508	42031	39771	1711072	10166.55	310.75	7128.01	72.01	
77										
78	NASHVILLE, TENNESSEE									
79	(METROPOLITAN)									
80	0.40	30094	30706	29858	1223219	7274.29	235.09	5796.09	133.46	
81										
82	NORFLK/VA BCH/PTSMH/CHESPKE, VA									
83	(NORFOLK REGIONAL)									
84	0.31	18459	18940	18332	937937	1499.49	45.00	965.51	1.51	
85										
86	OKLAHOMA CITY, OKLAHOMA									
87	(WILL ROGERS WORLD)									
88	0.37	23933	24328	23830	1129830	4229.28	29.71	4912.01	239.65	
89										
90	OMAHA, NEBRASKA									
91	(EPPLEY AIRFIELD)									
92	0.35	20561	20758	20146	987908	3683.28	121.14	5997.32	137.65	
93										
94	ONTARIO/SAN BERNARD/RIVERSE, CA									
95	(ONTARIO INTERNATIONAL)									
96	0.40	25701	25957	24958	1209013	2131.71	33.79	101.79	.09	
97	(RIVERSIDE MUNI)									
98	0.00	44	52	44	48					
99										
100	COMMUNITY TOTAL									
101	0.40	25745	26009	25002	1209061	2131.71	33.79	101.79	.09	
102										
103	PORTLAND, OREGON									
104	(PORTLAND INTERNATIONAL)									
105	0.72	36039	36665	35603	2154981	29516.87	286.48	6187.02	1000.91	
106										
107	RALEIGH/DURHAM, NORTH CAROLINA									
108	(RALEIGH-DURHAM)									
109	0.30	19933	20447	19702	940584	9533.60	399.73	2997.25	98.21	
110										
111										
112										

TABLE 4.8
AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS, AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS, ALL SERVICES AT MEDIUM AIR TRAFFIC HUBS

12 MONTHS ENDED DECEMBER 31, 1979

Line No.	Community (Airport Name) Percent of Enplanements	Aircraft departures			Enplaned passengers	Enplaned revenue tons				
		Total performed	Scheduled	Scheduled completed		Freight	Express	U.S. Mail		Foreign mail
								Priority	Nonpriority	
	1	2	3	4	5	6	7	8	9	10
1	RENO, NEVADA									
2	(RENO INTL)									
3	0.45	21757	22102	21284	1366273	1876.98	104.80	1480.24	4.17	
4										
5	ROCHESTER, NEW YORK									
6	(ROCHESTER-MONROE COUNTY)									
7	0.31	18966	19424	18841	946427	3934.26	205.09	3469.78	28.13	
8										
9	SACRAMENTO, CALIFORNIA									
10	(SACRAMENTO METROPOLITAN)									
11	0.47	19105	19339	18864	1418324	1094.98	73.88	3553.28		
12										
13	SALT LAKE CITY, UTAH									
14	(SALT LAKE CITY INTL)									
15	0.72	41478	41946	41204	2173282	9754.23	226.97	6691.39	121.53	
16										
17	SAN ANTONIO, TEXAS									
18	(SAN ANTONIO INTERNATIONAL)									
19	0.44	26262	26695	26152	1336768	6044.29	122.06	4171.69	128.62	
20										
21	SAN JOSE, CALIFORNIA									
22	(SAN JOSE MUNI)									
23	0.60	27913	28620	27202	1809049	5293.18	54.40	1049.58	262.31	
24										
25	SAN JUAN, PUERTO RICO									
26	(PUERTO RICO INTERNATIONAL)									
27	0.71	16198	16088	15395	2142534	54862.17	69.01	2913.89	1002.95	.44
28										
29	SPOKANE, WASHINGTON									
30	(SPOKANE INTERNATIONAL)									
31	0.28	16267	16465	16086	845490	2260.49	55.44	1767.67	20.51	
32										
33	SYRACUSE, NEW YORK									
34	(CLARENCE E HANCOCK)									
35	0.29	17370	17771	17271	892659	9680.04	132.46	2357.60	141.49	
36										
37	TUCSON, ARIZONA									
38	(TUCSON INTL)									
39	0.32	20341	20666	20112	975735	3691.52	44.91	1523.79	18.38	
40										
41	TULSA, OKLAHOMA									
42	(TULSA INTL)									
43	0.34	20571	20860	20419	1033231	6260.68	98.92	4512.39	693.85	
44										
45	WEST PALM BEACH/PALM BEACH,FLA									
46	(PALM BEACH INTERNATIONAL)									
47	0.39	21833	21697	21125	1171058	2342.29	112.77	1271.35	39.28	
48										
49	OVER-ALL TOTAL,									
50	MEDIUM HUBS									
51	16.48	955241	971835	916501	49805367	418000.43	7163.87	157227.26	21536.85	2.78
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TABLE 4.9

AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS, AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS, ALL SERVICES AT SMALL AIR TRAFFIC HUBS

12 MONTHS ENDED DECEMBER 31, 1979

Line No.	Community (Airport Name) Percent of Enplanements	Aircraft departures: Total performed	Aircraft departures: Scheduled	Aircraft departures: Scheduled completed	Enplaned passengers	Enplaned revenue tons: Freight	Enplaned revenue tons: Express	Enplaned revenue tons: U.S. Mail: Priority	Enplaned revenue tons: U.S. Mail: Nonpriority	Enplaned revenue tons: Foreign mail
	1	2	3	4	5	6	7	8	9	10
1	AKRON/CANTON, OHIO									
2	(AKRON-CANTON)									
3	0.06	4634	4842	4599	207794	402.18	35.77	572.50		
4										
5	ALBANY, NEW YORK									
6	(ALBANY COUNTY)									
7	0.24	13600	13954	13574	718869	1276.38	31.19	947.40	1.35	
8										
9	ALLENTOWN/BETHLEHEM/EASTON, PA									
10	(ALLENTOWN-BETHLEHEM-EASTON)									
11	0.10	7564	8128	7523	309907	355.03	25.68	170.06	2.49	
12										
13	AMARILLO/BORGER, TEXAS									
14	(AMARILLO AIR TERMINAL)									
15	0.09	7226	7299	7144	273689	734.29	3.15	709.42	.93	
16										
17	ASHEVILLE, NORTH CAROLINA									
18	(ASHEVILLE MUNI)									
19	0.05	5758	5976	5743	173246	536.64	26.63	240.94		
20										
21	AUGUSTA, GEORGIA									
22	(BUSH FIELD)									
23	0.06	4088	4133	4037	205230	738.24	4.80	244.71		
24										
25	AUSTIN, TEXAS									
26	(ROBERT MUELLER MUNI)									
27	0.21	13454	13676	13399	641368	1606.77	46.29	1863.39	.19	
28										
29	BANGOR, MAINE									
30	(BANGOR INTERNATIONAL)									
31	0.05	2735	2778	2710	156143	968.87	2.33	88.23		
32										
33	BATON ROUGE, LOUISIANA									
34	(RYAN)									
35	0.09	6625	6691	6580	270419	429.79	9.78	143.58		
36										
37	BILLINGS, MONTANA									
38	(LOGAN FIELD)									
39	0.11	10827	10945	10793	352292	682.46	5.47	1184.10	6.12	
40										
41	BISMARCK/MANDAN, NORTH DAKOTA									
42	(BISMARCK MUNI)									
43	0.06	7625	7721	7554	188831	365.48	2.63	294.74	1.71	
44										
45	BOISE, IDAHO									
46	(BOISE AIR TERMINAL/GOWEN FLD)									
47	0.15	10086	10231	9983	451805	694.53	47.35	1202.16	7.22	
48										
49	BRISTOL/KNGSPRT/JHNSN CTY,TENN									
50	(TRI CITY)									
51	0.07	8658	8973	8621	236473	1413.97	85.36	365.19		
52										
53	BROWNSVILLE/HRLGN/SAN BNTO,TEX									
54	(HARLINGEN INDUSTRIAL AIRPARK)									
55	0.02	1325	1345	1324	80648	103.81	.10	49.36		
56	(RIO GRANDE VALLEY INTL.)									
57	0.03	1685	1705	1666	96874	333.91	57.84	.61		
58										
59	COMMUNITY TOTAL									
60	0.05	3010	3050	2990	177522	437.72	57.94	49.95		
61										
62	BURLINGTON, VERMONT									
63	(BURLINGTON INTERNATIONAL)									
64	0.06	6150	6390	6076	203827	888.30	3.30	84.40		
65										
66	CEDAR RAPIDS/IOWA CITY, IOWA									
67	(CEDAR RAPIDS MUNI)									
68	0.08	6943	7687	6859	258924	1285.52	57.00	518.32		
69										
70	CHARLESTON, SOUTH CAROLINA									
71	(CHARLESTON AFB/MUNI)									
72	0.15	7825	7920	7757	462786	1112.77	76.04	721.73	12.36	
73										
74	CHARLESTON/DUNBAR, W. VIRGINIA									
75	(KANAWHA)									
76	0.08	6668	6928	6628	245616	337.23	11.98	517.16		
77										
78	CHARLOTTE AMALIE, VIRGIN IS.US									
79	(HARRY S.TRUMAN)									
80	0.05	3336	2885	2804	164222	86.72		101.10	.85	
81										
82	CHATTANOOGA, TENNESSEE									
83	(LOVELL FIELD)									
84	0.09	6620	6763	6581	291335	1495.40	41.90	1156.23		
85										
86	CHRISTIANSTED,ST.CROIX,V.I.,US									
87	(ALEXANDER HAMILTON)									
88	0.08	5089	4471	4405	764692	414.33		98.32	.01	
89										
90	COLORADO SPRINGS, COLORADO									
91	(PETERSON FIELD)									
92	0.11	7558	7762	7456	332841	1431.82	6.72	25.36		
93										
94	COLUMBIA, SOUTH CAROLINA									
95	(COLUMBIA METROPOLITAN)									
96	0.14	8856	9020	8750	436088	1520.91	76.56	1404.24	4.09	
97										
98	CORPUS CHRISTI, TEXAS									
99	(CORPUS CHRISTI INTERNATIONAL)									
100	0.08	3900	3827	3788	262611	504.77	12.63	142.47	.02	
101										
102	DAYTONA BEACH, FLORIDA									
103	(DAYTONA BEACH REGIONAL)									
104	0.13	6442	6369	6254	393511	656.46	6.69	1.78	.53	
105										
106	DES MOINES, IOWA									
107	(DES MOINES MUNI)									
108	0.21	14159	15116	13904	715239	2409.76	56.44	4611.28	192.12	
109										
110	ERIE, PENNSYLVANIA									
111	(ERIE INTL)									
112	0.05	3576	3669	3547	149776	407.28	18.44	164.53		

TABLE 4.9
AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS, AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS, ALL SERVICES AT SMALL AIR TRAFFIC HUBS
12 MONTHS ENDED DECEMBER 31, 1979

Line No.	Community (Airport Name) Percent of Enplanements	Aircraft departures			Enplaned passengers	Enplaned revenue tons				
		Total performed	Scheduled	Scheduled completed		Freight	Express	U.S. Mail		Foreign mail
								Priority	Nonpriority	
	1	2	3	4	5	6	7	8	9	10
1	EUGENE, OREGON									
2	(MAHLON SWEET FIELD)									
3	0.07	4932	5113	4839	218450	314.50	21.23	390.06		
4										
5	EVANSVILLE, INDIANA									
6	(EVANSVILLE DRESS REGIONAL)									
7	0.08	5075	5157	5017	255128	1362.81	75.22	126.64	1.10	
8										
9	FAIRBANKS, ALASKA									
10	(FAIRBANKS INTERNATIONAL)									
11	0.07	7951	6733	6417	219322	3628.14	.44	2348.50	1685.64	
12										
13	FARGO,N.D./MOORHEAD, MINNESOTA									
14	(HECTOR FIELD)									
15	0.06	6368	6436	6285	199922	477.88	1.46	531.47	2.20	
16										
17	FAYETTEVILLE, NORTH CAROLINA									
18	(FAYETTEVILLE MUNI/GRANNIS FLD)									
19	0.05	5629	5787	5623	158674	614.18	2.33	147.87		
20										
21	FORT MYERS, FLORIDA									
22	(PAGE FIELD)									
23	0.12	5536	5585	5506	382455	767.58	32.36	60.98	14.80	
24										
25	FORT WAYNE, INDIANA									
26	(MUNICIPAL/BAER FIELD)									
27	0.08	7551	7948	7506	266544	1738.64	67.21	756.23		
28										
29	FRESNO, CALIFORNIA									
30	(FRESNO AIR TERMINAL)									
31	0.18	10340	10570	10045	567165	602.85	31.41	730.50	.54	
32										
33	GAINESVILLE, FLORIDA									
34	(GAINESVILLE MUNI)									
35	0.06	2647	2188	2164	180550	204.64	2.46	1.75		
36										
37	GRAND JUNCTION, COLORADO									
38	(WALKER FIELD)									
39	0.05	3149	3050	2969	168938	378.23	11.91	147.32		
40										
41	GRAND RAPIDS, MICHIGAN									
42	(KENT COUNTY)									
43	0.15	11938	12419	11799	468289	1464.60	90.77	677.10	.08	
44										
45	GREEN BAY/CLINTONVILLE, WIS.									
46	(AUSTIN-STRAUBEL FIELD)									
47	0.11	11421	11809	11151	342723	1562.45	8.38	506.39	.02	
48										
49	GREENSBORO/HIGH PT/WINSTN.N.C.									
50	(GREENSBORO-HIGH PT-WINSTN RPT.)									
51	0.23	17880	19140	17708	693365	3090.83	352.45	2751.90	27.64	
52	(SMITH-REYNOLDS)									
53	0.01	3650	3316	3206	46610	215.95	.22	1.52		
54										
55	COMMUNITY TOTAL									
56	0.24	21530	21456	20914	739975	3306.78	352.67	2753.42	27.64	
57										
58	GREENVILLE&SPARTANBURG, S.C.									
59	(GREENVILLE-SPARTANBURG)									
60	0.11	6478	6541	6327	346134	1135.84	506.04	1083.50	3.82	
61										
62	AGANA NAS, GUAM ISLAND									
63	(AGANA FIELD)									
64	0.05	2673	2756	2630	167797	3585.22		1230.54	570.00	.32
65										
66	HARRISBURG/YORK, PA.									
67	(HARRISBURG INTERNATIONAL)									
68	0.10	5909	6202	5846	306543	1277.61	5.97	456.84		
69										
70	HILO, HAWAII, HAWAII									
71	(GENERAL LYMAN FIELD)									
72	0.21	8381	8147	7205	637244	12934.83	.95	731.75	388.08	
73										
74	HUNTSVILLE&DECATUR, ALABAMA									
75	(MADISON COUNTY JETPORT)									
76	0.08	6851	6893	6755	269929	1077.18	23.59	39.29	.19	
77										
78	INDIO/PALM SPRINGS, CALIFORNIA									
79	(PALM SPRINGS MUNI)									
80	0.09	4484	4509	4345	280607	268.53	7.02	4.31	1.91	
81										
82	JACKSON-VICKSBURG, MISS.									
83	(ALLEN C THOMPSON FIELD)									
84	0.14	11151	11390	11104	435264	2364.88	7.28	1189.38		
85										
86	JUNEAU, ALASKA									
87	(JUNEAU MUNI)									
88	0.05	3837	3942	3763	193500	1010.11		538.02	180.66	
89										
90	KAILUA-KONA, HAWAII, HAWAII									
91	(KE-AHOLE)									
92	0.19	7374	7298	6139	579884	1796.02		191.61	164.05	
93										
94	KNOXVILLE, TENNESSEE									
95	(MC GHEE TYSON)									
96	0.16	11049	11244	10928	487724	2507.62	115.28	1474.71	3.16	
97										
98	LAKE TAHOE, CALIFORNIA									
99	(LAKE TAHOE)									
100	0.05	2412	2217	2698	161984	6.40	.30			
101										
102	LANSING, MICHIGAN									
103	(CAPITAL CITY)									
104	0.07	7148	7416	7076	220156	420.27	26.53	547.28		
105										
106	LEXINGTON/FRANKFORT, KENTUCKY									
107	(BLUE GRASS)									
108	0.11	8299	8433	8247	340959	1423.90	91.47	573.89	3.88	
109										
110	LINCOLN, NEBRASKA									
111	(LINCOLN MUNI)									
112	0.08	8860	8958	8624	245498	662.59	11.93	547.78		

TABLE 4.9
AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS, AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS, ALL SERVICES AT SMALL AIR TRAFFIC HUBS

12 MONTHS ENDED DECEMBER 31, 1979

Line No.	Community (Airport Name) Percent of Enplanements	Aircraft departures			Enplaned passengers	Enplaned revenue tons				
		Total performed	Scheduled	Scheduled completed		Freight	Express	U.S. Mail		Foreign Mail
								Priority	Nonpriority	
	1	2	3	4	5	6	7	8	9	10
1	LITTLE ROCK, ARKANSAS									
2	(ADAMS FIELD)									
3	0.20	13140	13470	13098	598237	2492.10	93.72	1746.19	.64	
4										
5	LUBBOCK, TEXAS									
6	(LUBBOCK REGIONAL)									
7	0.10	7022	7226	6986	299153	1049.32	9.07	455.34		
8										
9	MADISON, WISCONSIN									
10	(TRUAX FIELD)									
11	0.12	11324	11878	11160	382698	1398.88	11.47	450.65	.47	
12										
13	MELBOURNE, FLORIDA									
14	(CAPE KENNEDY REGIONAL)									
15	0.06	3589	3661	3575	206094	288.75	12.74	2.46	2.90	
16										
17	MIDLAND/ODESSA, TEXAS									
18	(MIDLAND REGIONAL)									
19	0.10	6436	6643	6420	303405	1213.26	3.28	379.92		
20										
21	MOBILE, AL/PASCAGOULA, MISS									
22	(BATES FIELD)									
23	0.11	10131	10493	10064	352239	443.34	69.03	416.68	.48	
24										
25	MOLINE, ILLINOIS/DAVENPORT, IOWA									
26	(QUAD-CITY)									
27	0.10	8439	9505	8309	315670	555.71	20.39	581.43	.09	
28										
29	MONTGOMERY, ALABAMA									
30	(DANNELLY FIELD)									
31	0.08	6516	6547	6449	243559	664.53	26.88	335.55	1.43	
32										
33	PENSACOLA, FLORIDA									
34	(PENSACOLA REGIONAL)									
35	0.08	4496	4177	4077	255994	443.96	14.62	844.20	4.02	
36										
37	PEORIA, ILLINOIS									
38	(GREATER PEORIA)									
39	0.07	7935	9306	7817	229441	849.15	1.36	554.52	.61	
40										
41	PORTLAND, MAINE									
42	(PORTLAND INTERNATIONAL JETPORT)									
43	0.08	6367	6771	6328	258871	1229.63	25.03	306.70		
44										
45	PROVIDENCE, RHODE ISLAND									
46	(THEODORE FRANCIS GREEN STATE)									
47	0.16	11055	11280	10927	494879	1735.00	54.83	1687.64	3.24	
48										
49	RAPID CITY, SOUTH DAKOTA									
50	(RAPID CITY REGIONAL)									
51	0.05	5705	5827	5685	164118	425.42	2.46	250.19	1.53	
52										
53	RICHMOND, VIRGINIA									
54	(RICHARD E BYRD FLYING FIELD)									
55	0.22	20752	21562	20633	675934	1419.98	37.21	916.29	1.21	
56										
57	ROANOKE, VIRGINIA									
58	(ROANOKE MUNI)									
59	0.15	14948	15917	14896	454407	1674.90	7.41	229.30		
60										
61	ROCHESTER, MINNESOTA									
62	(ROCHESTER MUNI)									
63	0.05	6171	6685	6133	172908	220.54	13.97	41.09	.08	
64										
65	SAGINAW/BAY CITY/MIDLAND, MICH.									
66	(TRI CITY)									
67	0.07	5595	5611	5290	219629	295.52	12.14	122.89		
68										
69	SALINAS/MONTEREY, CALIFORNIA									
70	(PENINSULA)									
71	0.08	4595	4686	4494	253750	169.37	22.52	6.17	.02	
72										
73	SANTA BARBARA CALIFORNIA									
74	(SANTA BARBARA)									
75	0.09	8396	7981	7567	177419	166.54	25.74	36.59	.10	
76	(SANTA MARIA PUBLIC)									
77	0.00	1537	1810	1536	10642	4.57	.61			
78										
79	COMMUNITY TOTAL									
80	0.09	9933	9791	9103	188061	171.11	25.75	36.59	.10	
81										
82	SARASOTA/BRADENTON, FLORIDA									
83	(SARASOTA-BRADENTON)									
84	0.17	9740	9831	9646	533438	842.37	62.25	2.72	1.00	
85										
86	SAVANNAH, GEORGIA									
87	(SAVANNAH MUNI)									
88	0.12	5986	6119	5942	384110	637.37	8.86	146.37	.82	
89										
90	SCRANTON/WILKES-BARRE, PENNA.									
91	(WILKES-BARRE-SCRANTON)									
92	0.06	4718	4926	4691	180210	262.50	3.96	94.83	2.74	
93										
94	SHREVEPORT, LOUISIANA									
95	(GREATER SHREVEPORT MUNI)									
96	0.15	11550	11632	11512	451785	1690.29	27.04	959.46		
97										
98	SIOUX FALLS, SOUTH DAKOTA									
99	(JOE FOSS FIELD)									
100	0.09	11062	11906	10783	282557	1096.15	6.33	1033.26	2.88	
101										
102	SOUTH BEND, INDIANA									
103	(ST JOSEPH COUNTY)									
104	0.07	5663	5700	5397	229018	592.09	77.77	339.73	.02	
105										
106	SPRINGFIELD, MISSOURI									
107	(SPRINGFIELD MUNI)									
108	0.09	4945	5806	4886	151467	416.63	1.59	94.98		
109										
110	TALLAHASSEE, FLORIDA									
111	(TALLAHASSEE MUNI)									
112	0.09	6551	5992	5846	282358	297.81	53.90	202.63	146.20	

TABLE 4.9

AIRCRAFT DEPARTURES, ENPLANED REVENUE PASSENGERS, AND ENPLANED REVENUE TONS OF CARGO AND MAIL IN TOTAL OPERATIONS, ALL SERVICES AT SMALL AIR TRAFFIC HUBS

12 MONTHS ENDED DECEMBER 31, 1979

Line No.	Community (Airport Name) Percent of Replacements	Aircraft departures			Enplaned passengers	Enplaned revenue tons				
		Total performed	Scheduled	Scheduled completed		Freight	Express	U.S. Mail		Foreign mail
								Priority	Nonpriority	
	1	2	3	4	5	6	7	8	9	10
1	TOLEDO, OHIO									
2	(TOLEDO EXPRESS)									
3	0.10	8628	8820	8554	318592	580.02	33.45	841.29	1.22	
4										
5	WICHITA, KANSAS									
6	(WICHITA MUNI)									
7	0.21	17772	18052	17624	632428	3616.66	104.96	2911.79	5.26	
8										
9	OVER-ALL TOTAL,									
10	SMALL HUBS									
11	8.57	642736	657317	628315	26851604	97059.33	3083.67	51701.36	3454.42	.32

TABLE 4.10

DOMESTIC INTERCITY PASSENGER-MILES BY MODE OF TRAVEL AND CLASS OF SERVICE: 1970 THROUGH 1979
(In Millions)

Mode and Class	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Total	1,161,625	1,207,341	1,277,070	1,323,770	1,232,924	1,285,379	1,363,218	1,433,920	1,518,125	1,529,721
Total common carrier	135,625	136,341	148,070	157,770	161,924	162,379	176,218	188,020	213,625	241,821
Scheduled air carrier[1]	104,146	106,438	118,138	126,317	128,425	131,728	145,271	156,610	182,669	208,856
Regular service	19,797	19,370	21,956	23,564	24,602	23,622	24,400	25,441	29,665	41,853
Coach service	84,349	87,068	96,182	102,753	103,823	108,106	120,871	131,169	153,004	167,003
Class I line-haul railways[2]	6,179	4,403	4,332	5,053	5,799	5,251	5,847	5,710	5,556	6,365
First-class service	765	516	520	583	613	502	570	524	467	489
Coach service	5,414	3,887	3,812	4,470	5,186	4,749	5,277	5,186	5,089	5,876
Motor carriers[3] Class I, II, III	25,300	25,500	25,600	26,400	27,700	25,400	25,100	25,700	25,400	26,600
Private automobiles	1,026,000	1,071,000	1,129,000	1,166,000	1,071,000	1,123,000	1,187,000	1,245,900	1,304,500	1,287,900
Percent air to total	9.0	8.8	9.3	9.5	10.4	10.3	10.6	10.9	12.0	13.7
Percent air to total common carrier	76.8	78.1	79.8	80.1	79.3	81.1	82.4	83.3	85.5	86.4
Percent total rail to air	5.9	4.1	3.7	4.0	4.5	4.0	4.0	3.6	3.0	3.0
Percent first-class rail to total air	0.7	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.2

1 Scheduled operations of domestic trunk and local service carriers.

2 Includes Pullman Company and excludes commutation.

3 Excludes intrastate and other local movements.

Source: Interstate Commerce Commission, Bureau of Economics; Bureau of Accounts and Statistics, CAB; and Transportation Facts and Trends, July 1978.

V. U.S. CIVIL AIR CARRIER FLEET

U.S. air carrier fleet data shown in this chapter were developed from monthly Aircraft/Engine Utilization Reports submitted by air carrier operators. The aircraft population shown in this chapter is not an inventory of the aircraft owned by the air carriers but represents the aircraft actually used by the air carrier fleet during December 1979.

The air carrier fleet size shown for 1979 is significantly larger than that for 1978. This increase is partly due to the deregulation of the airlines under the Airline Deregulation Act of 1978 and the associated entry of new carriers. The increase is also due to revised FAA reporting requirements. Beginning in 1979 multi engine aircraft in scheduled passenger and cargo service of the commuter air taxis must be reported as being in air carrier service. The first year these aircraft were counted as air carrier aircraft was 1979. A new class of air carrier was also created in 1979--the all cargo air service operators (Section 418). In the past these operators were classified as air taxi and aircraft used in the service were counted in the air taxi group.

TABLE 5.1

COMPOSITION OF U.S. AIR CARRIER FLEET BY TYPE OF AIRCRAFT:
DECEMBER 1970 THROUGH 1979

YEAR	TOTAL	FIXED-WING AIRCRAFT					ROTARY-WING AIRCRAFT		
		TOTAL FIXED-WING	TURBINE			PISTON	TOTAL ROTARY-WING	TURBINE	PISTON
			TOTAL	TURBOJET	TURBOPROP				
1970	2,679	2,663	2,510	2,136	374	153	16	13	3
1971	2,642	2,628	2,482	2,132	350	146	14	11	3
1972	2,583	2,569	2,436	2,118	318	133	14	11	3
1973	2,599	2,586	2,449	2,145	304	137	13	10	3
1974	2,472	2,462	2,344	2,078	266	118	10	10	---
1975	2,495	2,488	2,374	2,114	260	114	7	7	---
1976	2,492	2,487	2,384	2,139	245	103	5	4	1
1977	2,473	2,470	2,402	2,168	234	68	3	3	---
1978	2,545	2,542	2,477	2,237	240	65	3	3	---
1979	3,609	3,608	3,053	2,486	566	556	1	1	---

NOTE: 1970-1978 INCLUDES ONLY THOSE AIRCRAFT USED DURING THE LAST QUARTER. DOES NOT INCLUDE AIRCRAFT OPERATED BY AIR TAXI OPERATORS WHO HOLD AUTHORITY TO OPERATE AIRCRAFT OVER 12,500 POUNDS, TURBOJET AIRCRAFT UNDER BLANKET AUTHORITY, OR AIRCRAFT OPERATED BY AIR TRAVEL CLUBS. THESE AIRCRAFT ARE SHOWN ON SEPARATE TABLES.

1979 ALSO INCLUDES AIRCRAFT OPERATED BY AIR TAXIS, COMMUTERS, AIR TRAVEL CLUBS, AND ALL CARGO AIR SERVICE OPERATORS.

TABLE 5-2
TOTAL AIRCRAFT IN OPERATION BY THE U.S. AIR CARRIER FLEET BY TYPE OF CARRIER AND BY TYPE OF AIRCRAFT: DECEMBER 1978 AND 1979

Type of Aircraft	All Air Carriers		Certified Route Air Carriers		Supplemental Air Carriers		Commercial Operators		Air Taxi Operators		Commuter Operators		All Cargo Operators		Air Travel Clubs	
	1979	1978	1979	1978	1979	1978	1979	1978	1979	1978	1979	1978	1979	1978	1979	1978
Total Aircraft	3,609	2,899	2,466	2,348	70	74	118	123	352	339	495	*	93	*	15	15
Fixed wing--total	3,608	2,896	2,466	2,345	70	74	118	123	351	339	495		93		15	15
Turbine-powered--total	3,053	2,646	2,460	2,339	63	68	71	70	192	154	178		74		15	15
Turbojet--total	2,486	2,344	2,308	2,184	39	35	15	18	52	95	---		60		12	12
4-engine	511	515	455	465	26	26	14	18	2	---	---		8		6	6
3-engine	1,256	1,155	1,232	1,140	9	6	---	---	---	9	---		15		---	---
2-engine	719	674	621	579	4	3	1	---	50	86	---		37		6	6
Turboprop--total	566	302	152	155	24	33	56	52	140	59	177		14		3	3
4-engine	80	84	9	9	23	26	31	32	---	14	5		9		3	3
2-engine	486	218	143	146	1	7	25	20	140	45	172		5		---	---
1-engine	---	---	---	---	---	---	---	---	---	---	---		---		---	---
Piston-powered--total	556	250	6	6	7	6	47	53	159	185	318		19		---	---
4-engine	59	47	4	---	3	3	39	39	6	5	4		3		---	---
3-engine	1	---	---	---	---	---	---	---	---	---	1		---		---	---
2-engine	496	199	2	4	4	3	8	14	153	178	313		16		---	---
1-engine	---	4	---	2	---	---	---	---	---	2	---		---		---	---
Rotory-wing--total	1	3	---	3	---	---	---	---	1	---	---		---		---	---
Turbine-powered	1	3	---	3	---	---	---	---	1	---	---		---		---	---

*Not reported to FAA prior to 1979.

TABLE 5.3
COMPOSITION OF U.S. AIR CARRIER FLEET BY MANUFACTURER AND MODEL: 1978 AND 1979

Type of Aircraft Number of Engines and Model	1979	1978	Type of Aircraft Number of Engines and Model	1979	1978
Total Aircraft	3,609	2,545	Douglas DC9	381	373
			Grumman G1159	6	---
Fixed-wing--total	3,608	2,542	Hamburger-Flugzenbau HFB320	4	---
			Israel Aircraft 1123	1	---
Turbine-powered--total	3,052	2,477	Israel Aircraft 1124	1	---
			Learjet LR23	5	---
4-engine--total	591	576	Learjet LR24	3	---
			Learjet LR25	6	---
Turbojet--total	511	509	Learjet LR35	4	---
Boeing B707	175	201	Learjet LR36	---	---
Boeing B720	7	14	Rockwell		
Boeing B747	131	115	International NA265	2	---
Convair CV880	---	---	Sud Aviation SE210	6	---
Douglas DC8	188	178			
Lockheed L1329	1	1	Turboprop--total	486	173
SN Concorde	9	---	Beech BE90	3	---
			Beech BE99	85	---
Turboprop--total	80	67	Beech BE200	4	---
Lockheed L188	52	46	Convair CV580/640	105	83
Lockheed L382	20	21	Convair CV600	15	8
DeHavilland DHC 7	8	---	DeHavilland DHC6	78	14
			DeHavilland DHC104	2	---
3-engine--total	1,256	1,146	Embraer EMB110	4	---
Boeing B727	1,029	931	Fairchild FH27	6	4
Douglas DC10	140	133	Fairchild FH227	22	22
Lockheed L1011	87	82	Grumman G159	15	1
			Handley-Page HP137	13	---
2-engine--total	1,205	729	Handley-Page SAHP137	3	---
			Hawker-Siddeley HS748	1	1
Turbojet--total	719	582	Nihon YS11	18	23
Airbus A300	12	6	Nord ND262	20	5
Boeing B737	206	173	Nomad N24	1	---
British Aircraft BA111	28	30	Nord STC262	4	---
Cessna C500	4	---	Short SD330	21	---
Convair CV30	6	---	Short SD3	---	---
Dassault MD20	44	---	Swearingen SA26	1	---
DeHavilland DHC125	---	---	Swearingen SA226	65	6

TABLE 5.3 (CONTINUED)
COMPOSITION OF U.S. AIR CARRIER FLEET BY MANUFACTURER AND MODEL: 1978 AND 1979

TYPE OF AIRCRAFT NUMBER OF ENGINES AND MODEL	1979	1978	TYPE OF AIRCRAFT NUMBER OF ENGINES AND MODEL	1979	1978
PISTON-POWERED--TOTAL	556	68	CESSNA C404	17	---
			CESSNA C411	1	---
4-ENGINE--TOTAL	59	33	CESSNA C414	2	---
DOUGLAS DC4	4	1	CONVAIR CV240	3	---
DOUGLAS DC6	46	30	CONVAIR CV 340/440	22	6
DOUGLAS DC7	---	1	CURTISS-WRIGHT CW46	12	15
LOCKHEED L1049	1	1	DEHAVILLAND DHC4	1	---
CANADAIR C44	1	---	DORNIER DO28	1	---
DEHAVILLAND DHC114	7	---	DOUGLAS DC3	90	3
			FAIRCHILD C82	2	2
3-ENGINE--TOTAL	1	---	GRUMMAN G21	1	---
BRITTEN-NORMAN BN2A3	1	---	MARTIN M404	20	8
			PIPER PA23	20	---
2-ENGINE-TOTAL	496	34	PIPER PA30	2	---
AERO COMMANDER AC500	1	---	PIPER PA31	122	---
AERO COMMANDER AC680	2	---	PIPER PA34	10	---
BEECH BE18	26	---	PIPER PA44	1	---
BEECH BE55	3	---	PIPER PA600AS	14	---
BEECH BE65	2	---			
BEECH BE80	1	---	1-ENGINE--TOTAL	---	1
BEECH BE95	1	---	CESSNA C185	---	1
BRITTEN-NORMAN BN2A	10	---			
BRITTEN-NORMAN BN28	1	---	ROTARY-WING--TOTAL	1	3
CESSNA C310	11	---			
CESSNA C337	2	---	TURBINE-POWERED--TOTAL	1	3
CESSNA C340	2	---	KAWASAKI KV107	1	---
CESSNA C402	93	---	SIKORSKY S61	---	3

TABLE 5.4
TOTAL FLIGHT TIME BY TYPE OF AIRCRAFT IN THE U.S. AIR CARRIER FLEET: 1978 AND 1979

Type of Aircraft Number of Engines and Model	Hours 1979	Hours 1978	Type of Aircraft Number of Engines and Model	Hours 1979	Hours 1978
Total Aircraft	7,551,821	6,984,816	Douglas DC9	1,001,148	993,765
			Grumman G1159	3,265	2,839
Total Fixed-Wing	7,549,598	6,980,252	Hamburger-Flugzenbau HF320	2,363	2,933
			Israel Aircraft IL1123	318	269
Turbine-Powered--Total	7,325,224	6,814,252	Israel Aircraft IL1124	155	83
			Learjet LR23	631	---
4-Engine--Total	1,649,600	1,696,156	Learjet LR24	1,173	229
			Learjet LR25	3,905	8,036
Turbojet--Total	1,503,771	1,555,849	Learjet LR35	4,031	4,284
Boeing B707	539,189	592,885	Learjet LR36	63	190
Boeing B720	18,310	39,072	Rockwell		
Boeing B747	482,550	418,177	International NA265	1,179	1,197
Convair CV22	91	307	Sud Aviation SE210	4,959	925
Douglas DC8	462,053	504,868			
Lockheed L1329	589	540	Turboprop--Total	512,096	380,582
SN Concorde	989	---	Beech BE200	2,100	---
			Beech BE90	459	---
Turboprop--Total	145,829	140,307	Beech BE99	45,309	---
DeHavilland DHC7	8,905	2,905	Cessna C212	675	256
Lockheed L188	81,280	79,422	Convair CV580	140,759	134,105
Lockheed L382	55,644	57,980	Convair CV600	16,348	12,405
			Convair CV640	12,744	14,930
3-Engine--Total	3,519,847	3,159,647	DeHavilland DHC6	59,679	26,768
Boeing B727	2,870,352	2,509,204	DeHavilland DHC104	130	---
Douglas DC10	377,434	409,816	Embraer EMB110	614	---
Lockheed L1011	272,061	240,627	Fairchild F27	5,177	9,514
			Fairchild F227	31,926	38,455
2-Engine--Total	2,155,777	1,958,449	Grumman G159	12,294	5,842
			Hawker-Siddeley HS748	2,087	2,067
Turbojet--Total	1,643,681	1,577,867	Handley-Page HP137	6,179	---
Airbus A300	23,843	11,431	Handley-Page SAHP137	2,962	---
Boeing B737	470,075	412,829	Nihon YS11	43,798	51,925
British Aircraft BA111	75,807	76,624	Nomad N24	51	---
Cessna C500	680	---	Nord ND262	41,134	51,984
Convair CV30	2,092	2,202	Nord STC262	9,510	---
Dassault MD20	47,796	59,448	Short SD330	27,671	5,519
DeHavilland DH125	198	583	Short SD3	---	8,170

TABLE 5.4 (CONTINUED)
TOTAL FLIGHT TIME BY TYPE OF AIRCRAFT IN THE U.S. AIR CARRIER FLEET: 1978 AND 1979

TYPE OF AIRCRAFT NUMBER OF ENGINES AND MODEL	HOURS 1979	HOURS 1978
SWEARINGEN SA226	50,436	18,642
SWEARINGEN SWSA26	54	---
PISTON-POWERED--TOTAL	224,374	166,009
4-ENGINE--TOTAL	45,472	36,956
CANADAIR C44	465	---
DEHAVILLAND DHC114	---	239
DOUGLAS DC4	5,934	4,756
DOUGLAS DC6	31,006	31,958
LOCKHEED L1049	8,067	---
3-ENGINE--TOTAL	354	---
BRITTEN-NORMAN BN2A3	354	---
2-ENGINE-TOTAL	178,548	128,632
AERO COMMANDER AC680	166	---
AERO COMMANDER AC500	104	---
BEECH BE55	416	---
BEECH BE58	99	---
BEECH BE65	286	---
BEECH BE80	455	---
BEECH BE95	32	---
BEECH BE18	3,222	31
BRITTEN-NORMAN BN2A	2,026	---
BRITTEN-NORMAN BN28	100	---
CESSNA C310	1,157	---
CESSNA C337	38	---
CESSNA C340	244	---
CESSNA C401	165	---
CESSNA C402	23,818	64
CESSNA C404	2,877	---
CESSNA C411	51	---
CESSN. C414	94	---
CONVAIR CV240	2,067	367
CONVAIR CV340/440	16,784	12,011
CURTISS-WRIGHT CW46	8,708	8,708
DEHAVILLAND DHC4	529	527
DEHAVILLAND DHC104	109	---
DORNIER DO28	16	---
DOUGLAS DC8	69,964	94,597
FAIRCHILD C82	1,957	1,865
GRUMMAN G21	154	114
GRUMMAN G44	---	11
MARTIN M404	12,659	10,337
PIPER PA23	1,073	---
PIPER PA30	22	---
PIPER PA31	25,751	---
PIPER PA34	1,157	---
PIPER PA44	25	---
PIPER PA600AS	2,223	---
1-ENGINE--TOTAL	---	421
CESSNA C185	---	---
CESSNA C206	---	89
CESSNA C207	---	332
ROTARY-WING--TOTAL	2,223	4,564
TURBINE-POWERED--TOTAL	2,223	4,564
BELL HELICOPTER HB205A	542	---
BELL HELICOPTER HB212	87	---
KAWASAKI KV107	392	---
SIKORSKY S61	1,202	4,564

* 1978 INCLUDES 6,242,690 HOURS FOR CERTIFICATED ROUTE AIR CARRIERS; 184,664 HOURS FOR SUPPLEMENTAL CARRIERS; 275,396 HOURS FOR COMMERICAL CARRIERS; 276,102 HOURS FOR AIR TAXI, AND 5,964 HOURS FOR AIR TRAVEL CLUBS.

** 1979 INCLUDES 6,729,921 HOURS FOR CERTIFICATED ROUTE AIR CARRIERS; 170,624 HOURS FOR SUPPLEMENTAL CARRIERS; 130,113 HOURS FOR COMMERCIAL CARRIERS; 263,559 HOURS FOR AIR TAXI; 153,725 HOURS FOR COMMUTERS; 5,007 HOURS FOR AIR TRAVEL CLUBS AND 98,868 FOR ALL CARGO CARRIERS.

TABLE 5.5

TOTAL AIRCRAFT IN CERTIFICATED ROUTE AIR CARRIER OPERATIONS
BY CARRIER AND BY ENGINE TYPE: DECEMBER 1979

Air Carrier Group and Carrier	Total all Carriers	Turbojet				Turboprop			Piston			
		Total Turbojet	4-engine	3-engine	2-engine	Total Turboprop	4-engine	2-engine	Total Piston	4-engine	2-engine	1-engine
Total	2,466	2,308	455	1,232	621	152	9	143	6	4	2	---
Trunk Carriers--total	1,699	1,699	334	1,150	215	---	---	---	---	---	---	---
American	259	259	83	176	---	---	---	---	---	---	---	---
Braniff	125	125	32	93	---	---	---	---	---	---	---	---
Continental	69	69	---	69	---	---	---	---	---	---	---	---
Delta	211	211	21	146	44	---	---	---	---	---	---	---
Eastern	256	256	---	165	91	---	---	---	---	---	---	---
National	56	56	---	56	---	---	---	---	---	---	---	---
Northwest	108	108	26	82	---	---	---	---	---	---	---	---
Trans World	187	187	80	102	5	---	---	---	---	---	---	---
United	351	351	85	212	54	---	---	---	---	---	---	---
Western	77	77	7	49	21	---	---	---	---	---	---	---
Local service Carriers--total	578	430	---	56	374	146	6	140	1	---	2	---
Air California	14	11	---	---	11	3	3	---	---	---	---	---
Air Florida	14	14	---	---	14	---	---	---	---	---	---	---
Air Midwest, Inc.	8	---	---	---	---	8	---	8	---	---	---	---
Air New England	19	---	---	---	---	19	---	19	---	---	---	---
Air Pacific	6	---	---	---	---	5	2	3	---	---	1	---
Aspen	11	---	---	---	---	11	---	11	---	---	---	---
Air Wisconsin	14	---	---	---	---	14	1	13	---	---	---	---
Air West	48	47	---	6	41	1	---	1	---	---	---	---
Frontier	64	37	---	---	37	27	---	27	---	---	---	---
Makey International	1	---	---	---	---	---	---	---	1	---	1	---
Midway	3	3	---	---	3	---	---	---	---	---	---	---
Ozark	50	37	---	---	37	13	---	13	---	---	---	---
Piedmont	46	36	---	6	30	10	---	10	---	---	---	---
Pacific Southwest	30	30	---	30	---	---	---	---	---	---	---	---
Republic	103	72	---	---	72	31	---	31	---	---	---	---
Southwest	19	19	---	1	18	---	---	---	---	---	---	---
Texas International	34	34	---	---	34	---	---	---	---	---	---	---
U.S. Air, Inc.	90	90	---	13	77	---	---	---	---	---	---	---
Wright	4	---	---	---	---	4	---	4	---	---	---	---
Alaska-Hawaii Carriers--total	34	28	---	---	28	6	3	3	---	---	---	---
Aloha	9	9	---	---	9	---	---	---	---	---	---	---
Hawaiian	10	9	---	---	9	1	---	1	---	---	---	---
Reeve Aleutian	5	---	---	---	---	5	3	2	---	---	---	---
Wien Air Alaska	10	10	---	---	10	---	---	---	---	---	---	---
International and Territorial Passenger/ Cargo--total	91	91	67	24	---	---	---	---	---	---	---	---
Alaska	10	10	---	10	---	---	---	---	---	---	---	---
Pan Am World	81	81	67	14	---	---	---	---	---	---	---	---
Scheduled Air Cargo Carriers--total	64	60	54	2	4	---	---	---	4	4	---	---
Airlift International	12	12	11	1	---	---	---	---	---	---	---	---
Flying Tiger Line	38	34	34	---	---	---	---	---	4	4	---	---
Jetway Inc.	4	4	---	---	4	---	---	---	---	---	---	---
Seaboard World	10	10	9	1	---	---	---	---	---	---	---	---
Helicopter Carriers--total	---	---	---	---	---	---	---	---	---	---	---	---
New York Airways	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 5.6

AIRCRAFT IN OPERATION BY CERTIFICATED ROUTE AIR CARRIERS, BY MANUFACTURER AND MODEL
DECEMBER 31, 1970 THROUGH 1979*

AIRCRAFT MAKE AND MODEL	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
TOTAL	2,437	2,389	2,361	2,361	2,244	2,267	2,271	2,234	2,348	2,466
TURBOJET--4-ENGINE--TOTAL	891	847	768	712	594	561	533	500	465	455
BOEING 707	399	359	337	315	281	264	240	244	198	170
BOEING 720	115	106	56	44	30	23	18	15	10	2
BOEING 747	79	104	105	109	108	97	104	107	115	130
CONCORDE	---	---	---	---	---	---	---	---	---	9
CONVAIR 880	41	41	41	37	---	---	---	---	---	---
DOUGLAS DC8	257	236	227	207	180	177	171	154	142	144
LOCKHEED L1329	---	1	1	---	---	---	---	---	---	---
TURBOJET--3-ENGINE--TOTAL	631	651	738	844	893	961	992	1,035	1,140	1,232
BOEING 727	631	638	662	710	724	765	793	836	931	1,014
DOUGLAS DC10	---	13	59	86	103	121	122	122	127	131
LOCKHEED L1011	---	---	17	48	66	76	77	77	82	87
TURBOJET--2-ENGINE--TOTAL	519	530	522	500	501	500	518	529	579	621
AIRBUS A300	---	---	---	---	---	---	---	2	6	12
BAC111	59	58	58	31	36	30	31	31	30	28
BOEING 737	133	133	134	134	136	133	138	141	173	201
DASSAULT MD20	---	5	1	---	---	---	---	---	---	---
DOUGLAS DC9	327	334	329	335	329	337	349	355	370	376
LEARJET LR 23	---	---	---	---	---	---	---	---	---	2
LEARJET LR 24	---	---	---	---	---	---	---	---	---	1
LEARJET LR 25	---	---	---	---	---	---	---	---	---	1
SUD CARAVELLE	---	---	---	---	---	---	---	---	---	---
TURBOPROP--4-ENGINE--TOTAL	47	28	22	20	17	16	21	6	9	9
DEHAVILLAND DHC7	---	---	---	---	---	---	---	---	---	3
LOCKHEED L188	36	24	19	19	17	16	21	6	9	6
LOCKHEED L382	8	4	3	1	---	---	---	---	---	---
VICKERS VISCOUNT	3	---	---	---	---	---	---	---	---	---
TURBOPROP--2-ENGINE--TOTAL	261	258	234	218	184	177	159	150	146	143
BEECH BE99	3	5	1	---	---	3	3	---	---	---
CONVAIR CV580/640	118	115	110	105	89	69	69	68	60	59
CONVAIR 600	24	22	25	24	16	19	12	8	8	4
DEHAVILLAND DHC6	6	8	13	9	8	21	18	14	13	16
FAIRCHILD FH227	47	48	32	31	33	29	27	22	23	21
FAIRCHILD FH27	35	34	29	24	15	10	7	4	5	1
NIHON YS11	21	21	22	23	21	23	23	23	19	12
NORD ND262	---	---	---	---	---	---	---	5	9	---
PILATUS PC6A, 6B	5	3	---	---	---	---	---	---	---	---
SHORT SC7	2	2	2	2	2	3	---	---	---	---
SHORT SHD330	---	---	---	---	---	---	---	---	1	1
SWEARINGEN SA226	---	---	---	---	---	---	---	6	8	29
PISTON--4-ENGINE--TOTAL	13	4	3	3	1	1	2	---	---	4
CANADAIR CL44	8	1	---	---	---	---	---	---	---	---
DOUGLAS DC6, 6A, 6B	3	3	3	3	1	1	2	---	---	4
DOUGLAS DC7, 7B, 7C	2	---	---	---	---	---	---	---	---	---
PISTON--2-ENGINE--TOTAL	50	46	47	36	32	37	31	11	4	2
PISTON--1-ENGINE--TOTAL	9	11	13	15	12	7	10	---	2	0
HELICOPTERS--TOTAL	16	14	14	13	10	7	5	3	3	0

*AIRCRAFT NOT USED IN AIR CARRIER OPERATIONS, SUCH AS THOSE USED FOR CREW TRAINING AND GENERAL UTILITY PURPOSES AND AIRCRAFT HELD FOR DISPOSAL ARE EXCLUDED.

TABLE 5.7

AIRCRAFT IN OPERATION BY SUPPLEMENTAL CARRIERS, BY CARRIER, AND BY ENGINE TYPE: DECEMBER 31, 1979

Name of Carrier	Total Aircraft	Turbojet				Turboprop			Piston		
		Total Turbojet	4-engine	3-engine	2-engine	Total Turboprop	4-engine	2-engine	Total Piston	4-engine	2-engine
Total	70	39	26	9	4	24	23	1	7	3	4
Capitol International Airways	6	6	6	--	--	--	--	--	--	--	--
Check Air	1	--	--	--	--	1	--	1	--	--	--
Evergreen International Airlines	12	9	5	--	4	3	3	--	--	--	--
Providence Air Charter	2	--	--	--	--	--	--	--	2	--	2
Rich International Airways	6	1	1	--	--	--	--	--	5	3	2
Trans America Airlines	33	13	10	3	--	20	20	--	--	--	--
World Airways	10	10	4	6	--	--	--	--	--	--	--

TABLE 5.8

AIRCRAFT IN OPERATION BY SUPPLEMENTAL CARRIERS,
BY MANUFACTURER AND MODEL:
DECEMBER 1979

Aircraft Make and Model	1979
Total	70
Turbojet--total	39
4-engine	26
Boeing B747	1
Douglas DC8	25
3-engine	9
Douglas DC10	9
2-engine	4
Douglas DC9	4
Turboprop--total	24
4-engine	23
Lockheed L188	11
Lockheed L382	12
2-engine	1
Fairchild FH227	1
Piston--total	7
4-engine	3
Douglas DC6	3
2-engine	4
Convair CV240	2
Curtiss Wright CW46	2

TABLE 5-9

AIRCRAFT IN OPERATION BY COMMERCIAL OPERATORS, BY CARRIER,
AND BY ENGINE TYPE: DECEMBER 1979

Name of Carrier	Total Aircraft	Turbojet			Turboprop			Piston		
		Total Turbojet	4- and 3-engine	2-engine	Total Turboprop	4-engine	2-engine	Total Piston	4-engine	2-engine
Total	118	15	14	1	56	31	25	47	39	8
Air Berlin USA	2	2	2	---	---	---	---	---	---	---
Air Distribution, Inc.	1	---	---	---	---	---	---	1	1	---
Air Illinois, Inc.	6	---	---	---	6	---	6	---	---	---
Alaska International Air, Inc.	5	---	---	---	5	5	---	---	---	---
Bluebell Aviation	1	---	---	---	---	---	---	1	1	---
Central America Internation, Inc.	3	---	---	---	---	---	---	3	1	2
Challenge Air Transport, Inc.	2	---	---	---	---	---	---	2	1	1
Concord International Airlines	1	1	1	---	---	---	---	---	---	---
Fairways Corp.	1	---	---	---	1	---	1	---	---	---
Fleming International Airways	4	---	---	---	4	4	---	---	---	---
Great American Airways	1	1	---	1	---	---	---	---	---	---
Global Int. Airways Corp.	2	2	2	---	---	---	---	---	---	---
General Mills, Inc.	1	1	1	---	---	---	---	---	---	---
Great Northern Airlines, Inc.	5	---	---	---	5	3	2	---	---	---
Inter Continental Airways	1	1	1	---	---	---	---	---	---	---
Michigan Peninsula	1	1	1	---	---	---	---	---	---	---
Northern Air Cargo	5	---	---	---	---	---	---	5	3	2
Pacific Alaska Airlines	4	---	---	---	2	---	2	2	2	---
Petroleum Air Transport	9	---	---	---	---	---	---	9	9	---
Southern Air Transport, Inc.	3	---	---	---	3	3	---	---	---	---
Transcontinental Airlines, Inc.	12	---	---	---	---	---	---	12	9	3
Zantop International Airlines	48	6	6	---	30	16	14	12	12	---

TABLE 5.10

AIRCRAFT IN OPERATION BY COMMERCIAL OPERATORS, BY MANUFACTURER AND MODEL: DECEMBER 31, 1977, 1978, AND 1979

Aircraft Make and Model	1977	1978	1979
Total Aircraft	161	123	118
Turbojet -- total	60	18	15
4-engine	8	18	14
Boeing B707	1	3	4
Boeing B720	3	4	---
Douglas DC8	4	10	9
Lockheed L1329	---	1	1
3-engine	29	---	---
Boeing 727	29	---	---
2-engine	23	---	1
Boeing 737	10	---	---
Douglas DC9	13	---	1
Turboprop -- total	50	52	56
4-engine	31	32	31
Lockheed L188	23	24	23
Lockheed L382	8	8	8
2-engine	19	20	25
Convair CV580	3	2	2
Convair CV640	14	14	14
DeHavilland DHC6	---	---	2
Fairchild F27	---	2	2
Grumman G159	1	1	1
Handley Page HP137	---	---	3
Hawker Siddley HS748	1	1	1
Piston -- total	51	53	47
4-engine	31	39	39
Canadair, Ltd. C44-D4	---	---	1
Douglas 4	28	36	1
Douglas 6	1	---	36
Douglas 7	1	1	---
Lockheed 1049	1	2	1
2-engine	19	14	8
Convair CV440	2	---	---
Curtiss-Wright CW46	9	5	4
Demavilland DHC4	---	2	---
Fairchild C82	2	2	2
Martin M404	3	3	---
Douglas 3	3	2	2
1-engine	1	---	---
Cessna C185	1	---	---

TABLE 5.11

TOTAL AIRCRAFT IN OPERATION BY COMMUTER AIR TAXI OPERATORS, BY BY CARRIER, AND BY ENGINE TYPE: DECEMBER 1979

Name of Carrier	Total All Aircraft	Turboprop		Piston		
		4-engine	2-engine	4-engine	3-engine	2-engine
Total	495	5	172	4	1	313
Air Bahai	6	---	---	---	---	6
Airest and Westfield Aviation	3	---	---	---	---	3
Air Hawaii Corp.	9	---	---	---	---	9
Air Nebraska, Inc.	3	---	---	---	---	3
Air Nevada Airlines, Inc.	4	---	---	---	---	4
Air North	5	---	---	---	1	4
Air North, Inc.	5	---	5	---	---	---
Air U.S.	4	---	3	---	---	1
Air Vectors Airways, Inc.	7	---	---	---	---	7
Alamo Flyers, Inc.	4	---	---	---	---	4
Alaska Aers Ind., Inc.	4	---	4	---	---	---
Alaska Central Airways, Inc.	2	---	1	---	---	1
Bar Harbour Airlines	13	---	12	---	---	1
Big Sky Airlines	4	---	2	---	---	2
Brandt Air	1	---	---	---	---	1
Browers Airlines	7	---	---	---	---	7
Business Commuter	2	---	---	---	---	2
Cap Smythe Air Service	2	---	2	---	---	---
Cascade Airways, Inc.	14	---	14	---	---	---
Century Airlines	4	---	---	---	---	4
Channel Flying, Inc.	2	---	---	---	---	2
Cochise Airlines, Inc.	4	---	4	---	---	---
Colorado Airlines, Inc.	1	---	---	---	---	1
Command Airways, Inc.	4	---	4	---	---	---
Commutair	5	---	1	---	---	4
Crown Airlines	4	---	---	---	---	4
Cumberland Airlines	8	---	1	---	---	7
Downeast Airlines Inc.	6	---	---	---	---	6

TABLE 5.11 (CONTINUED)

TOTAL AIRCRAFT IN OPERATION BY COMMUTER AIR TAXI OPERATORS, BY BY CARRIER, AND BY ENGINE TYPE: DECEMBER 1979

NAME OF CARRIER	TOTAL ALL AIRCRAFT	TURBOPROP		PISTON		
		4-ENGINE	2-ENGINE	4-ENGINE	3-ENGINE	2-ENGINE
EVERGREEN HELICOPTER	5	---	5	---	---	---
FISCHER BROS. AVIATION	3	---	---	3	---	---
FRONTEIR FLYING SERVICE	1	---	---	---	---	1
GOLDEN CARRIAGE AIRCRAFT	4	---	---	---	---	4
GREEN HILLS AVIATION	1	---	---	---	---	1
GULL AIR, INC.	5	---	---	---	---	5
HOLIDAY AIRLINES	1	---	---	---	---	1
HYANNIS AVIATION	2	---	---	---	---	2
INDIANA AIRWAYS	3	---	---	---	---	3
IMPERIAL COMMUTER AIRLINES	8	---	---	---	---	8
JAMAIRE, INC.	5	---	---	---	---	5
L.A.B. FLYING SERVICE	3	---	---	---	---	3
LAS VEGAS AIRLINES	7	---	---	---	---	7
MERRIMACK AIRLINES AND NEW JERSEY AIRWAYS	8	---	---	---	---	8
MESABA AVIATION	1	---	1	---	---	---
METRO AIRLINES	18	---	15	---	---	3
MOUNTAIN HOME AIR SERVICE	2	---	---	---	---	2
MUNG NORTHERN AIRLINES	8	---	---	---	---	8
NEW HAVEN AIRWAYS	6	---	1	---	---	5
NOREAST COMMUTER AIRLINES	2	---	---	---	---	2
OAHU AND KAUAI AIRLINES	2	---	---	---	---	2
OCEAN AIRWAYS	4	---	1	---	---	3
OMAHA AVIATION	1	---	---	---	---	1
OMNI AIRLINES	3	---	---	---	---	3
PERMAIN AIRWAYS	4	---	---	---	---	4
PHILLIPS AIRLINES	5	---	---	---	---	5
PILGRIM AIRLINES	8	---	8	---	---	---
PIONEER AIRWAYS	3	---	3	---	---	---
POCONO AIRLINES	3	---	3	---	---	---
POLAR AIRWAYS	4	---	---	---	---	4
PRECISION AIRLINES	14	---	1	---	---	13
RANSOME AIRLINES	16	2	14	---	---	---

TABLE 5.12

AIRCRAFT IN OPERATION BY COMMUTER AIR TAXI OPERATORS,
BY MANUFACTURER AND MODEL: DECEMBER 1979

Aircraft Make and Model	1979
Total	495
Turboprop--total	177
4-engine	5
DeHavilland DH7	5
2-engine	172
Beech BE90	3
Beech BE99	50
Beech BE200	1
Convair STC580	2
Convair STC600	2
DeHavilland DH6	56
DeHavilland DH104	1
Embraer EMB 110	4
GAF Nomad N24	1
Handley-Page HP137	5
Handley-Page SAHP137	3
Nord ND 262	9
Nord STC 262	4
Short SD 330	7
Swearingen SA26	1
Swearingen SA226	23
Piston--total	318
4-engine	4
DeHavilland DH114	4
3-engine	1
Britten-Norman BN2A3	1
2-engine	313
Aero Commander AC500	1
Aero Commander AC680	2
Beech BE18	18
Beech BE55	3
Beech BE65	2
Beech BE80	1
Beech BE95	1
Britten-Norman BN2A	10
Britten-Norman BN2B	1
Cessna C310	11
Cessna C337	2
Cessna C340	2
Cessna C402	92
Cessna C404	17
Cessna C411	1
Cessna C414	2
Douglas DC3	2
Dornier D028	1
Grumman G21	1
Piper PA23	15
Piper PA30	2
Piper PA31	112
Piper PA34	10
Piper PA44	1
Piper PA60OAS	3

TABLE 5.13

TOTAL AIRCRAFT IN OPERATION BY AIR TAXI OPERATORS,
BY CARRIER, AND BY ENGINE TYPE: DECEMBER 1979

Name of Carrier	Total all Aircraft	Turbojet		Turboprop	Piston		Helicopter
		4-engine	2-engine	2-engine	4-engine	2-engine	
Total	352	2	50	140	6	153	1
Academy Airlines	3	---	---	---	---	3	---
Aero-Dyne Corp.	4	---	---	---	---	4	---
Aero Transit	4	---	---	---	---	4	---
Aero Virgin Island	4	---	---	---	---	4	---
Air Cargo American	2	---	---	---	---	2	---
Air Indiana	4	---	---	---	---	4	---
Air Sunshine	1	---	---	---	---	1	---
Air Tours, Inc.	1	---	---	---	---	1	---
Alpha Airlines	2	---	---	---	---	2	---
Altair Airlines	13	---	---	13	---	---	---
American Cynamid Co.	2	---	2	---	---	---	---
American Inter-Island	5	---	---	---	---	5	---
Apollo Airways, Inc.	5	---	---	5	---	---	---
Atlantic Jet Charter	2	---	2	---	---	---	---
Basher Flight Service	4	---	---	---	---	4	---
Brennan and Hargraves	2	---	---	---	---	2	---
Britt Airlines	16	---	---	16	---	---	---
Carribbean Air Service	6	---	---	---	---	6	---
Century Airlines	4	---	---	---	---	4	---
Chrysler Corp.	3	---	3	---	---	---	---
Coleman Air Transport	7	---	---	7	---	---	---
Columbia Helicopters	1	---	---	---	---	---	1
Commuter Airlines	5	---	---	5	---	---	---
Crystal Shamrock	2	---	---	---	---	2	---
DHL Island Airways	5	---	---	---	3	2	---
Emerald Airlines	3	---	---	3	---	---	---
Executive Air Fleet	7	---	7	---	---	---	---
Florida Airlines	12	---	---	---	---	12	---
Florida Airmotive	2	---	---	---	---	2	---
Gem State Airlines	9	---	---	9	---	---	---
Global Air Enterprises	2	---	2	---	---	---	---
Golden West Airlines	4	---	---	4	---	---	---
Great Western Airlines	2	---	---	2	---	---	---
Gulf Airtransport	2	---	---	---	---	2	---
Henson Aviation	10	---	---	10	---	---	---

TABLE 5.13 (CONTINUED)

TOTAL AIRCRAFT IN OPERATION BY AIR TAXI OPERATORS,
BY CARRIER, AND BY ENGINE TYPE: DECEMBER 1979

NAME OF CARRIER	TOTAL ALL AIRCRAFT	TURBOJET		TURBOPROP	PISTON		HELICOPTER
		4-ENGINE	2-ENGINE	2-ENGINE	4-ENGINE	2-ENGINE	
INTERNATIONAL AIR SERVICE	3	---	3	---	---	---	---
INTERSTATE AIRLINES	8	---	---	8	---	---	---
JET EXECUTIVE INTERNATIONAL	2	---	2	---	---	---	---
JET FLEET CORP.	1	---	1	---	---	---	---
JIMSAIR AVIATION SERVICE	2	---	---	---	---	2	---
KAHILI AIRLINES AND SWIFT	2	---	---	---	---	2	---
KEY AIRLINES	5	---	---	---	---	5	---
MANNION AIR CHARTER	3	---	---	---	---	3	---
MARCO ISLAND AIRWAYS	6	---	---	---	---	6	---
MIDSTATE AIRLINES	4	---	---	4	---	---	---
MIDWEST AIR CHARTER	44	---	17	5	---	22	---
MISSISSIPPI VALLEY AIRLINES	9	---	---	9	---	---	---
NEVADA AIRLINES	6	---	---	---	---	6	---
PINEHURST AIRLINES	4	---	---	4	---	---	---
PRIESTER AVIATION SERVICE	2	---	---	2	---	---	---
PROVINCETOWN-BOSTON AIR	17	---	---	---	---	17	---
RED CARPET FLYING SERVICE	4	---	---	---	---	4	---
ROYAL INDUSTRIES	1	---	1	---	---	---	---
SIERRA PACIFIC AIRLINES	7	---	---	7	---	---	---
SKYFREIGHT	1	---	---	---	---	1	---
SKYSTREAM AIRLINES	3	---	---	3	---	---	---
SKYWAY AVIATION	5	---	---	---	---	5	---
SMB STAGE LINES	9	---	---	6	---	3	---
SOUTHEAST AIRLINES	3	2	---	1	---	---	---
SOUTHERN FLYER	3	---	---	---	---	3	---
STEVENS BEECHCRAFT	2	---	2	---	---	---	---
SUBURBAN AIRLINES	5	---	---	5	---	---	---
SWIFT AIRLINES	7	---	---	4	3	---	---
THUNDERBIRD AIRWAYS	4	---	4	---	---	---	---
TRANS FLORIDA AIRLINES	4	---	3	---	---	1	---
TROPIC AIR LIMITED	1	---	---	---	---	1	---
VIKING INTERNATIONAL	1	---	---	1	---	---	---
VERO MONMOUTH AIRLINES	4	---	---	---	---	4	---
WINDSTAR AVIATION	2	---	1	---	---	2	---
ZANTOP AIRWAYS	7	---	---	7	---	---	---

TABLE 5.14
AIRCRAFT IN OPERATION BY AIR TAXI OPERATORS BY
MANUFACTURER AND MODEL: DECEMBER 1977 THROUGH 1979

AIRCRAFT MAKE AND MODEL	1979	1978	1979	AIRCRAFT MAKE AND MODEL	1977	1978	1979
TOTAL AIRCRAFT	261	337	352	DEHAVILLAND DH104	---	---	1
				FAIRCHILD FH27	---	---	3
FIXED-WING--TOTAL	258	337	351	GRUMMAN G159	6	7	14
				HANDLEY-PAGE HP137	---	---	5
TURBOJET--TOTAL	74	96	52	NIHON YS11	---	---	6
				NORD ND262	18	20	11
4-ENGINE--TOTAL	---	---	2	SHORT SD330	4	4	13
BOEING B720	---	---	1	SHORT SD3	---	4	---
BOEING B707	---	---	1	SWEARINGEN SA226	---	---	13
3-ENGINE--TOTAL	---	9	---	PISTON--TOTAL	154	183	159
BOEING B727	---	9	---				
				4-ENGINE--TOTAL	2	5	6
2-ENGINE--TOTAL	74	87	50	DOUGLAS DC4	---	2	---
CESSNA C500	---	---	4	DOUGLAS DC6	2	2	3
DASSAULT MD20	45	45	12	DEHAVILLAND DH114	---	---	3
DEHAVILLAND DH125	---	1	---				
DOUGLAS DC9	---	1	---	2-ENGINE--TOTAL	152	177	153
GRUMMAN G1159	5	6	6	BEECH BE18	---	---	---
HAMBURGER/FLUGZENBAU HR320	3	6	4	CESSNA C402	---	---	1
ISRAEL AIRCRAFT 1123	---	1	1	CONVAIR CV240	---	2	1
ISRAEL AIRCRAFT 1124	---	1	1	CONVAIR CV340/440	13	22	15
LEARJET LR23	3	1	3	CURTISS-WRIGHT CW46	5	5	6
LEARJET LR24	---	---	2	DEHAVILLAND DH4	---	1	1
LEARJET LR25	11	13	5	DOUGLAS DC3	121	130	77
LEARJET LR35	3	8	4	MARTIN M404	12	16	20
ROCKWELL INT'L NA265	2	4	2	PIPER PA23	---	---	3
SUD AVIATION SE210	---	---	6	PIPER PA31	---	---	10
				PIPER 600AS	---	---	11
TURBOPROP--TOTAL	30	58	140				
				1-ENGINE--TOTAL	---	1	---
4-ENGINE--TOTAL	1	7	---	CESSNA C210	---	1	---
DEHAVILLAND DHC7	---	1	---				
LOCKHEED L188	1	6	---	ROTARY WING--TOTAL	3	---	1
2-ENGINE--TOTAL	29	51	140	TURBINE--TOTAL	3	---	1
BEECH B99	---	---	35	KAWASAKI KV107	---	---	1
BEECH B200	---	---	3	SIKORSKY S61	3	---	---
CONVAIR CV580	1	12	23				
CONVAIR CV600	---	4	9				
DEHAVILLAND DH6	---	---	4				

TABLE 5.15

TOTAL AIRCRAFT IN OPERATION BY ALL CARGO AIR SERVICE OPERTORS,
BY CARRIER, AND BY ENGINE TYPE: DECEMBER 1979

Name of Carrier	Total all Engines	Turbojet			Turboprop		Piston	
		4-engine	3-engine	2-engine	4-engine	2-engine	4-engine	2-engine
Total	93	8	15	37	9	5	3	16
Airgo	1	--	--	--	--	--	--	1
Bo-S-Aire Corp.	7	--	--	--	--	--	--	7
Combs Freight air	7	--	--	--	1	--	--	6
Falcon Airways	5	--	--	--	--	--	3	2
Federal Express	52	--	15	37	--	--	--	--
Hawaiian Airlines Air Cargo	8	--	--	--	8	--	--	--
Rosenbalm Aviation	8	8	--	--	--	--	--	--
Summit Airlines	5	--	--	--	--	5	--	--

TABLE 5.16

AIRCRAFT IN OPERATION BY ALL CARGO AIR SERVICE OPERATORS, BY MANUFACTURER AND MODEL: DECEMBER 1979

Aircraft Make and Model	1979
Total	93
Turbojet--total	60
4-engine	8
Douglas DC8	8
3-engine	15
Boeing B727	15
2-engine	37
Boeing B737	5
Dassault MD20	32
Turboprop--total	14
4-engine	9
Lockheed L188	9
2-engine	5
Convair STC580	5
Piston--total	19
4-engine	3
Douglas DC4	3
2-engine	16
Convair CV440	7
Douglas DC 3	9

TABLE 5.17

AIRCRAFT IN OPERATION BY AIR TRAVEL CLUBS BY CARRIER AND BY ENGINE TYPE: DECEMBER 1979

Name of Carrier	Total Aircraft	Turbojet		Turboprop
		4-engine	2-engine	4-engine
Total	15	6	6	3
Ambassadair	2	2	--	--
Atlanta Skylarks	1	1	--	--
Club USA International	1	1	--	--
Emerald Shillelagh Chowder and Marching Society, Inc.	1	--	--	1
Fiesta Air Travel Club	1	1	--	--
Jet Set Travel Club	1	1	--	--
Nomads	2	--	1	1
Ports of Call Travel Club	6	--	5	1

TABLE 5.18

AIRCRAFT IN OPERATION BY TRAVEL CLUBS, BY MANUFACTURER AND MODEL: DECEMBER 1979

Aircraft Make and Model	1979
Total	15
Turbojet--total	12
4-engine	6
Boeing B720	4
Douglas DC8	2
2-engine	6
Convair CV30	6
Turboprop--total	3
4-engine	3
Lockheed L188	3

VI. U.S. CIVIL CARRIER OPERATING DATA

The air carrier data contained in this chapter were obtained from the following sources published by the Bureau of Accounts and Statistics at the Civil Aeronautics Board:

Financial Data--Air Carrier Financial Statistics, published quarterly.
Traffic Data--Air Carrier Traffic Statistics, published monthly.
Supplemental Carrier Data--Air Carrier Analytic Charts and Supplemental Carrier Statistics, published quarterly.

Starting with the year 1970, data contained herein for domestic operations are compiled on a 50-states basis.

TABLE 6.1

TRAFFIC DATA, ALL (SCHEDULED AND NONSCHEDULED) SERVICES OF THE CERTIFICATED ROUTE AIR CARRIERS: 1978 AND 1979

Traffic Category	Total All Services		Total Domestic Service		Total International/ Territorial Service	
	1978	1979	1978	1979	1978	1979
Revenue Passenger-Miles Flown (000)	236,997,534	269,599,679	187,812,586	212,602,877	49,184,948	59,996,802
Available Seat-Miles (000)	381,113,418	425,306,265	306,200,541	337,580,417	74,912,877	86,244,177
						0.0
Revenue Passenger Enplanements (000)	279,301	320,388	257,021	295,061	22,280	25,327
Revenue Ton-Miles Flown (000)*	31,095,013	34,543,518	23,151,823	25,670,838	7,943,190	8,872,680
Passenger	23,699,802	26,963,680	18,781,281	21,263,993	4,918,521	5,699,687
Freight	6,157,200	6,298,906	3,507,265	3,498,817	2,649,935	2,800,089
Express	56,494	56,192	55,741	55,354	753	838
U.S. Mail	1,167,683	1,206,298	806,006	850,546	361,677	355,752
Foreign Mail	13,833	18,387	1,530	2,079	12,303	16,308
Revenue Aircraft-Miles Flown (000)	2,608,128	2,855,955	2,248,868	2,468,490	359,260	387,465

* Details may not add to total due to rounding.

** Percent revenue passenger-miles flown of available seat-miles in revenue passenger service. This represents the proportion of aircraft seating capacity that is actually sold and utilized.

TABLE 6.2

REVENUE AIRCRAFT DEPARTURES, MILES AND HOURS FLOWN, AND AVERAGE SPEED IN ALL DOMESTIC SERVICES OF THE CERTIFICATED ROUTE AIR CARRIERS: 1970 - 1979

Year	Revenue Aircraft Departures*	Revenue Aircraft Miles Flown (000)	Revenue Aircraft Hours Flown	Average Airborne Speed (Miles per Hour)
1970	4,806,402	2,027,540	5,035,182	403
1971	4,690,869	2,003,878	4,949,458	405
1972	4,737,343	1,999,530	4,944,515	404
1973	4,820,409	2,097,883	5,183,453	405
1974	4,449,633	1,938,041	4,820,918	402
1975	4,456,146	1,947,660	4,826,355	404
1976	4,598,152	2,051,614	5,047,504	406
1977	4,798,591	2,161,952	5,296,101	408
1978	4,874,565	2,249,102	5,449,292	413
1979	5,214,142	2,468,490	6,077,815	406

* Revenue Aircraft Departures figures prior to 1977 do not incude non-scheduled services.

TABLE 6.3

REVENUE AIRCRAFT DEPARTURES, MILES AND HOURS FLOWN, AND AVERAGE SPEED IN ALL INTERNATIONAL/TERRITORIAL SERVICES OF THE CERTIFICATED ROUTE AIR CARRIERS: 1970 - 1979

Year	Revenue Aircraft Departures*	Revenue Aircraft Miles Flown (000)	Revenue Aircraft Hours Flown	Average Airborne Speed (Miles per Hour)
1970	313,154	398,752	811,013	492
1971	308,065	373,980	776,467	482
1972	309,095	376,346	783,581	480
1973	314,168	457,840	947,824	483
1974	276,468	412,830	856,782	482
1975	248,564	377,033	781,003	483
1976	236,067	368,707	762,131	484
1977	323,205	363,088	745,575	487
1978	301,802	359,260	735,334	489
1979	251,708	387,465	787,748	492

* Revenue Aircraft Departures figures prior to 1977 do not incude non-scheduled service.

TABLE 6.4
TOTAL TON-MILES AVAILABLE IN ALL SERVICES OF THE
UNITED STATES AIR CARRIERS: 1970 - 1979
(THOUSANDS OF TON-MILES)

YEAR	TOTAL AVAILABLE TON-MILES	CERTIFICATED ROUTE AIR CARRIERS			SUPPLEMENTAL AIR CARRIERS
		TOTAL	DOMESTIC SERVICES	INTERNATIONAL/ TERRITORIAL SERVICES	
1970	46,273,427	44,298,170	32,580,842	11,717,328	1,975,257
1971	49,584,516	47,255,550	33,994,418	13,261,132	2,328,966
1972	50,867,516	48,680,473	34,877,554	13,802,919	2,187,043
1973	53,966,736	51,443,758	37,371,558	14,072,200	2,522,978
1974	51,153,441	48,941,526	35,565,908	13,375,618	2,211,915
1975	51,215,945	49,288,695	36,511,214	12,777,481	1,927,250
1976	53,521,569	51,708,842	38,819,097	12,889,745	1,812,727
1977	56,775,493	54,789,077	41,412,289	13,376,788	1,986,416
1978	58,907,436(R)	56,869,894(R)	43,557,208(R)	13,312,686(R)	2,037,542(R)
1979	64,301,740	62,541,587	47,337,928	15,203,659	1,760,153

(R)REVISED.

TABLE 6.5

REVENUE TON-MILES FLOWN IN ALL SERVICES BY CERTIFICATED ROUTE
AIR CARRIERS OF THE UNITED STATES: 1970 - 1979
(THOUSANDS OF TONS)

YEAR	CERTIFICATED ROUTE AIR CARRIERS		
	TOTAL*	DOMESTIC OPERATIONS	INTERNATIONAL AND TERRITORIAL OPERATIONS
1970	20,185,500	13,876,803	6,308,694
1971	20,905,968	14,141,786	6,764,182
1972	22,805,371	15,584,558	7,220,813
1973	23,927,657	16,707,015	7,220,642
1974	23,900,208	16,999,202	6,901,006
1975	23,533,743	17,069,474	6,464,269
1976	25,709,152	18,801,891	6,907,261
1977	27,582,374	20,268,464	7,313,910
1978	31,095,184(R)	23,151,995(R)	7,943,189
1979	34,538,856	25,666,175	8,872,681

*CATEGORIES MAY NOT ADD TO TOTAL DUE TO ROUNDING.

(R)REVISED.

TABLE 6.6

PASSENGER OPERATIONS IN SCHEDULED DOMESTIC SERVICE OF
CERTIFICATED ROUTE AIR CARRIERS: 1970 - 1979

Year	Revenue Passenger Enplanements (000)	Revenue Passenger Miles (000)	Available Seat-Miles (000)	Revenue Passenger Load Factor*	Average On-Line Passenger Trip-Length (Miles)	Average Passenger Revenue Per Passenger-Miles (Cents)
1970	153,662	104,155,983	212,943,866	48.9	678	6.00
1971	156,195	106,438,408	221,503,165	48.1	681	6.33
1972	172,452	118,137,978	226,614,145	52.1	685	6.40
1973	183,272	126,317,334	244,699,119	51.6	689	6.63
1974	189,733	129,732,395	233,880,101	55.5	684	7.52
1975	188,746	131,728,492	241,282,125	54.6	698	7.69
1976	206,279	143,271,283	261,247,796	54.8	704	8.16
1977	222,283	156,609,249	280,618,915	55.8	704	8.61
1978	253,957(R)	182,669,238(R)	299,541,841(R)	61.0	719	8.49
1979	292,537	208,856,162	332,720,672	62.8	714	8.93

(R)Revised

*Percent revenue passenger-miles of available seat-miles.

TABLE 6.7

PASSENGER OPERATIONS IN SCHEDULED INTERNATIONAL AND TERRITORIAL SERVICE OF
THE CERTIFICATED ROUTE AIR CARRIERS: 1970 - 1979

Year	Revenue Passenger Enplanements (000)	Revenue Passenger Miles (000)	Available Seat-Miles (000)	Revenue Passenger Load Factor (Percent)*	Average On-Line Passenger Trip-Length (Miles)	Average Passenger Revenue Per Passenger-Miles (Cents)
1970	16,260	27,563,211	51,959,992	53.0	1,695	5.01
1971	17,474	29,219,294	58,320,186	50.1	1,672	5.08
1972	18,897	34,268,298	60,797,069	56.4	1,813	4.98
1973	18,936	35,639,973	65,897,988	54.1	1,882	5.32
1974	17,725	33,186,199	63,125,961	52.6	1,872	6.39
1975	16,316	31,081,668	61,724,118	50.4	1,905	7.17
1976	17,039	33,716,743	61,573,853	54.8	1,979	7.15
1977	18,043	36,609,570	64,946,986	56.4	2,029	7.61
1978	20,759	44,111,944	69,208,878	63.7	2,125	7.49
1979	24,146	53,123,042	83,324,314	63.8	2,200	7.66

*Percent revenue passenger-miles of available seat-miles.

TABLE 6.8

REVENUE AIRCRAFT-MILES FLOWN IN ALL SERVICES OF CERTIFICATED ROUTE AIR CARRIERS: 1970 - 1979
(THOUSANDS OF TONS)

YEAR	TOTAL*	DOMESTIC OPERATIONS	INTERNATIONAL/ TERRITORIAL OPERATIONS
1970	2,418,169	2,019,417	398,752
1971	2,377,858	2,003,878	373,980
1972	2,375,878	1,999,530	376,346
1973	2,448,113	2,057,745	390,369
1974	2,258,188	1,900,584	357,604
1975	2,240,506	1,909,486	331,020
1976	2,319,967	2,001,357	318,610
1977	2,418,645	2,103,798	314,847
1978	2,608,362(R)	2,249,102(R)	359,260(R)
1979	2,855,955	2,468,490	387,465

* DETAILS MAY NOT ADD TO TOTAL DUE TO ROUDING.
(R) REVISED

TABLE 6.9

U.S. SUPPLEMENTAL AIR CARRIER OPERATIONS: 1977 - 1979

Item	1977	1978(R)	1979
Revenue aircraft miles (000)	62,774	69,946	61,492
Commercial	38,306	46,355	41,125
Military	24,468	23,591	20,367
Revenue passenger originations (000)	2,192	2,951	2,471
Revenue passenger miles (000)	8,199,053	9,999,037	8,590,356
Commercial	6,647,466	8,297,453	6,546,257
Military	1,551,587	1,701,584	2,044,099
Available seat-miles (000)	9,264,160	11,347,569	9,910,493
Revenue cargo ton-miles (000)	384,133	372,650	331,381
Commercial	159,242	163,516	183,423
Military	224,891	209,134	147,958
Available ton-miles	1,812,727	2,037,542	1,760,153
Operating revenue ($000)	417,480	529,654	561,913
Transport	398,656	506,388	538,271
Contract and charter			
Commercial	291,181	380,155	366,378
Military	107,237	123,437	135,934
Other	239	2,796	35,959
Other than transport	18,827	23,262	23,639
Operating expenses ($000)	418,086	512,465	559,735
Operating profit or loss ($000)	(-599)	17,195	2,175
Number of operators	7	8	7

(R)Revised.

TABLE 6.10

OPERATING REVENUE OF DOMESTIC PASSENGER/CARGO OPERATORS,
CERTIFICATED ROUTE AIR CARRIERS: 1970 - 1979
(THOUSANDS OF DOLLARS)

YEAR	TOTAL OPERATING REVENUES*		PASSENGER		U.S. MAIL (INCLUDING SUBSIDY)		EXPRESS AND FREIGHT		EXCESS BAGGAGE		OTHER	
	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT
1970	7,130,716	100.0	6,246,426	87.6	204,639	2.9	460,714	6.5	12,134	0.1	206,801	2.9
1971	7,701,402	100.0	6,736,350	87.5	224,283	2.9	485,182	6.3	13,562	0.2	242,027	3.1
1972	8,587,996	100.0	7,564,841	88.1	228,031	2.7	541,346	6.3	12,842	0.1	240,936	2.8
1973	9,604,652	100.0	8,379,396	87.3	257,745	2.7	615,099	6.4	14,289	0.1	338,124	3.5
1974	11,448,289	100.0	9,757,503	85.2	259,419	2.3	672,957	5.9	16,581	0.1	741,829	6.5
1975	11,910,894	100.0	10,113,091	84.9	185,336	1.6	696,135	5.8	18,863	0.2	897,469	7.5
1976	13,789,178	100.0	11,855,266	86.0	214,125	1.6	830,051	6.0	22,014	0.2	867,722	6.3
1977	15,690,236	100.0	13,489,111	86.0	277,518	1.7	960,857	6.1	20,913	0.1	941,837	6.1
1978(R)	17,943,472	100.0	15,508,727	86.4	266,,826	1.3	1,093,767	6.1	22,900	0.1	1,051,252	5.8
1979	21,279,354	100.0	18,665,553	87.7	328,463	1.5	1,160,454	5.5	27,680	0.1	1,097,204	5.2

(R)REVISED.

*DETAILS MAY NOT ADD TO TOTAL DUE TO ROUNDING.

TABLE 6.11

OPERATING EXPENSES OF DOMESTIC PASSENGER/CARGO OPERATORS,
CERTIFICATED ROUTE AIR CARRIERS: 1970 - 1979
(THOUSANDS OF DOLLARS)

YEAR	TOTAL OPERATING EXPENSES*		AIRCRAFT OPERATING EXPENSES						GROUND AND INDIRECT EXPENSE		NET OPERATING INCOME OR LOSS
			FLIGHT OPERATIONS		MAINTENANCE FLIGHT EQUIPMENT		DEPRECIATION AND AMORTIZATION FLIGHT EQUIPMENT AND OTHER				
	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT
1970	7,127,747	100.0	2,098,250	29.4	1,127,161	15.8	745,279	10.5	3,157,056	44.3	2,970
1971	7,443,222	100.0	2,235,004	30.0	1,124,526	15.2	749,077	10.1	3,334,614	44.7	258,181
1972	8,096,695	100.0	2,324,560	28.7	1,239,456	15.3	773,823	9.6	3,758,854	46.4	491,300
1973	9,116,173	100.0	2,605,723	28.6	1,397,007	15.3	834,607	9.2	4,278,836	46.9	488,479
1974	10,648,991	100.0	3,297,164	31.0	1,499,920	14.1	865,229	8.1	4,986,680	46.8	799,289
1975	11,781,406	100.0	3,869,405	32.8	1,595,358	13.6	882,569	7.5	5,434,073	46.1	129,488
1976	13,231,448	100.0	4,401,280	33.3	1,802,164	13.6	920,144	7.0	6,089,859	46.1	575,730
1977	15,036,431	100.0	5,229,115	34.8	1,986,460	13.2	959,707	6.4	6,861,149	45.6	653,805
1978(R)	16,948,581	100.0	5,577,201	32.9	2,125,080	12.5	1,213,125	7.2	8,033,173	47.4	994,891
1979	21,162,300	100.0	7,845,186	37.1	2,415,842	11.4	1,348,539	6.4	9,552,734	45.1	117,054

(R)REVISED.

*DETAILS MAY NOT ADD TO TOTAL DUE TO ROUNDING.

TABLE 6.12

OPERATING REVENUE OF INTERNATIONAL/TERRITORIAL PASSENGER/CARGO OPERATORS,
CERTIFICATED ROUTE AIR CARRIERS: 1970 - 1979
(THOUSANDS OF DOLLARS)

YEAR	TOTAL OPERATING REVENUES*		PASSENGER		U.S. MAIL (INCLUDING SUBSIDY)		EXPRESS AND FREIGHT		EXCESS BAGGAGE		OTHER	
	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT
1970	1,913,592	100.0	1,380,388	72.1	103,303	5.4	197,031	10.3	15,109	0.8	217,760	11.4
1971	2,080,262	100.0	1,483,973	71.4	90,188	4.3	220,553	10.6	15,672	0.8	269,874	12.9
1972	2,284,300	100.0	1,706,512	74.7	77,378	3.4	242,354	10.6	14,459	0.6	243,599	10.7
1973	2,526,878	100.0	1,894,914	75.0	71,366	2.8	268,055	10.6	15,231	0.6	277,314	11.0
1974	2,921,607	100.0	2,121,651	72.6	83,595	2.9	335,704	11.5	20,965	0.7	359,693	12.3
1975	3,063,399	100.0	2,230,081	72.9	89,793	2.9	355,805	11.6	25,476	0.8	362,245	11.8
1976	3,316,136	100.0	2,410,987	72.9	77,620	2.3	382,053	11.5	27,259	0.8	418,217	12.6
1977	3,774,262	100.0	2,785,706	73.8	79,582	2.1	425,296	11.3	20,797	0.6	462,882	12.3
1978(R)	4,331,776	100.0	3,304,992	76.3	82,457	1.9	444,087	10.3	20,020	0.5	480,221	11.1
1979	5,191,458	100.0	4,071,327	78.4	96,251	1.8	529,840	10.2	22,743	0.4	471,297	9.1

(R)REVISED

*DETAILS MAY NOT ADD TO TOTAL DUE TO ROUNDING.

TABLE 6.13

OPERATING EXPENSES OF INTERNATIONAL/TERRITORIAL PASSENGER/CARGO OPERATORS,
CERTIFICATED ROUTE AIR CARRIERS: 1970 - 1979
(THOUSANDS OF DOLLARS)

YEAR	TOTAL OPERATING EXPENSES*		AIRCRAFT OPERATING EXPENSES						GROUND AND INDIRECT EXPENSE		NET OPERATING INCOME OR LOSS
			FLIGHT OPERATIONS		MAINTENANCE FLIGHT EQUIPMENT		DEPRECIATION AND AMORTIZATION FLIGHT EQUIPMENT AND OTHER				
	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT
1970	1,894,398	100.0	515,182	27.2	241,077	12.7	187,889	10.0	950,241	50.2	19,202
1971	2,050,095	100.0	573,008	28.2	269,031	12.7	190,220	9.6	1,017,834	50.0	30,167
1972	2,233,879	100.0	595,859	26.7	300,476	13.4	211,908	9.5	1,125,635	50.4	50,421
1973	2,458,971	100.0	680,521	27.6	316,597	12.9	213,772	8.8	1,248,081	50.7	67,907
1974	2,994,713	100.0	1,037,441	34.6	356,187	12.0	213,966	7.1	1,387,119	46.3	-73,104
1975	3,059,348	100.0	1,050,250	34.3	363,869	11.9	212,456	7.0	1,432,774	46.8	4,051
1976	3,182,236	100.0	1,089,387	34.2	368,190	11.6	192,879	6.1	1,531,780	48.1	133,900
1977	3,552,189	100.0	1,170,021	32.9	414,486	11.7	238,009	6.7	1,729,672	48.7	222,072
1978(R)	4,007,653	100.0	1,210,641	30.2	457,787	11.4	303,424	7.6	2,035,801	50.8	324,124
1979	5,105,074	100.0	1,795,330	35.2	520,805	10.2	327,028	6.4	2,461,911	48.2	86,384

(R)REVISED.

*DETAILS MAY NOT ADD TO TOTAL DUE TO ROUNDING.

VII. AIRMEN

Statistics pertaining to airmen, both pilot and nonpilot, were obtained from the official airmen certification records maintained by the Airmen Certification and Medical Certification Branches of the Mike Monroney Aeronautical Center at Oklahoma City, Oklahoma. Active pilots are those pilots who hold a pilot certificate and a valid medical certificate.

TABLE 7.1

ACTIVE PILOT CERTIFICATES HELD: DECEMBER 31, 1970-1979

CATEGORY	1970	1971	1972	1973 3/	1974	1975	1976	1977	1978	1979
PILOT--TOTAL	732,729	741,009	750,869	714,607	733,728	728,187	744,246	R/783,932	798,833	814,667
STUDENT	195,861	186,428	181,477	181,905	180,795	176,978	188,801	R/203,510	204,874	210,180
PRIVATE	303,779	312,656	321,413	298,921	305,848	305,863	309,005	327,424	337,644	343,276
COMMERCIAL	186,821	192,409	196,228	182,444	192,425	189,342	187,801	188,763	185,833	182,097
AIRLINE TRANSPORT . . .	34,430	35,949	37,714	38,139	41,002	42,592	45,072	50,149	55,881	63,652
HELICOPTER (ONLY) **. .	6,677	7,992	7,987	5,968	5,647	4,932	4,804	4,819	4,874	5,218
GLIDER (ONLY) * **. .	3,114	3,571	4,080	4,288	4,824	5,348	5,789	6,208	6,541	6,796
LIGHTER-THAN-AIR * . .	2,047	2,004	1,970	2,942	3,187	3,132	2,974	3,059	3,186	3,448
NONPILOT--TOTAL	289,681	307,057	R/315,348	304,747	314,394	323,934	334,681	348,584	362,350	377,213
MECHANIC 1/	184,647	193,295	201,700	193,337	198,863	205,436	212,303	220,768	228,743	237,611
PARACHUTE RIGGER 1/ . .	6,424	6,839	7,287	6,941	7,900	8,327	8,718	8,994	9,200	9,381
GROUND INSTRUCTOR 1/ . .	44,176	46,145	48,450	46,827	49,249	51,365	53,464	55,717	57,738	59,680
DISPATCHER 1/	5,293	5,480	5,637	5,527	5,576	5,741	5,838	5,972	6,161	6,446
CONTROL TOWER OPERATOR .	21,032	26,450	R/23,353	23,250	23,342	23,956	24,584	25,107	25,388	25,232
FLIGHT NAVIGATOR	2,950	3,052	2,957	2,636	2,509	2,321	2,214	2,155	2,092	1,994
FLIGHT ENGINEER	25,159	25,796	25,964	26,229	26,955	26,788	27,560	29,871	33,028	36,869
FLIGHT INSTRUCTOR CERTIFICATES	37,882	37,760	37,858	36,795	42,418	44,777	46,236	49,362	52,201	54,398
INSTRUMENT RATINGS 2/ .	169,848	179,261	187,909	185,969	199,323	203,954	211,364	226,334	236,312	247,096

* GLIDER AND LIGHTER-THAN-AIR PILOTS ARE NOT REQUIRED TO HAVE A MEDICAL EXAMINATION; HOWEVER, THE TOTALS ABOVE REPRESENT PILOTS WHO RECEIVED A MEDICAL EXAMINATION.

** SEE TABLES 7.6 AND 7.7 FOR TOTAL ACTIVE HELICOPTER AND GLIDER PILOTS.

1/ NUMBERS REPRESENT ALL CERTIFICATES ON RECORD. NO MEDICAL EXAMINATION REQUIRED.

2/ SPECIAL RATINGS SHOWN ON PILOT CERTIFICATES, I.E., DO NOT INDICATE ADDITIONAL CERTIFICATES.

3/ THE DECREASE IN THE NUMBER OF AIRMEN RESULTED FROM A PURGING OF THE AIRMEN CERTIFICATION FILES. DURING THIS PROCESS, APPROXIMATELY 26,000 DUPLICATES OR FAULTY RECORDS WERE ELIMINATED.

R/ REVISED.

TABLE 7.2

WOMEN ACTIVELY ENGAGED IN AVIATION: DECEMBER 31, 1970-1979

Categories of Certificates Held	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Pilot--total	29,472	31,216	33,001	34,356	36,943	37,934	41,643	47,294	49,874	51,733
Student	15,787	16,417	17,053	18,593	19,298	19,600	22,254	25,705	26,354	26,714
Private	11,409	12,332	13,391	13,232	14,465	14,952	15,838	17,702	19,267	20,275
Commercial	1,897	2,032	2,196	2,083	2,596	2,733	2,857	3,090	3,306	3,618
Airline transport	79	88	101	95	116	137	160	193	270	361
Helicopter (only)	6	9	10	7	5	11	17	18	17	27
Glider (only) *	141	169	201	216	271	301	352	391	433	461
Lighter-than-air *	153	169	49	130	192	200	165	195	227	277
Nonpilot--total	3,078	3,413	3,594	3,074	3,471	3,809	4,252	4,716	5,135	5,600
Mechanic 1/	302	322	349	284	315	360	422	505	600	695
Parachute rigger 1/	461	470	483	336	495	504	516	535	544	553
Ground instructor 1/	2,006	2,081	2,166	1,960	2,139	2,249	2,369	2,525	2,682	2,852
Dispatcher 1/	38	39	40	39	42	50	55	65	76	105
Control tower operator	271	501	556	453	473	638	874	1,044	1,151	1,250
Flight engineer	0	0	0	2	7	8	16	42	82	145
Flight instructor	589	646	664	618	834	945	1,054	1,238	1,458	1,699

NOTE: Instrument ratings and Flight navigator not reported.

* Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination.

1/ No medical examination required.

TABLE 7.3

PILOT CERTIFICATES ISSUED, BY CATEGORY: CALENDAR YEARS 1975-1979

Categories of Certificates	1975		1976		1977		1978		1979	
	Original Issuances	Additional Ratings	Original Issuances	Additional Ratings	Original Issuances	Additional Ratings	Original Issuances	Additional Ratings	Original Issuances	Additional Ratings
Pilot--total	193,888	35,395	204,489	39,112	212,331	44,708	216,107 R/	39,959	214,567	41,331
Student	127,424	0	129,280	0	138,816	0	137,032 R/	0	135,956	0
Private	49,733	9,734	55,583	12,618	54,657	15,104	58,064	16,048	54,466	16,466
Commercial	12,620	21,860	13,577	22,059	11,121	22,806	11,789	17,501	12,627	17,793
Airline transport	2,765	3,370	3,869	3,901	5,697	6,229	6,912	5,921	8,981	6,603
Helicopter (only)	866	251	1,064	276	944	328	1,122	287	1,300	283
Glider (only)	230	158	848	238	792	220	759	188	642	157
Lighter-than-air	250	22	268	20	304	21	429	14	595	29
Nonpilot--total	12,491	7,137	15,069	7,751	16,066	7,267	16,418	6,679	17,895	7,129
Mechanic	6,930	2,606	8,501	3,149	9,121	3,307	8,791	3,269	9,697	3,812
Parachute rigger	414	62	454	76	304	36	235	50	201	45
Ground instructor	2,193	714	2,390	707	2,404	729	2,193	574	2,081	513
Dispatcher	140	1	106	0	161	0	193	0	292	0
Control tower operator	2,164	3,657	2,382	3,686	1,645	3,008	1,391	2,540	1,109	2,483
Flight navigator	4	0	2	0	16	0	8	1	2	0
Flight engineer	646	97	1,234	133	2,415	187	3,607	245	4,513	276
Flight instructor certificates 1/	5,233	3,427	6,137	4,718	6,352	6,397	5,930	5,375	6,716	6,072
Instrument ratings*	0	16,495	0	18,155	0	18,764	0	16,265	0	16,651

R/ Revised.

Note: Additional ratings are entered on current airman certificates as follows:
Private, commercial, and airline transport pilot--aircraft category, class, and type instrument rating.
Helicopter pilot--instrument and type ratings.
Flight instructor--ratings for each aircraft category in which the holder is qualified, and for instrument flying instruction.
Mechanic--airframe and powerplant ratings.
Parachute rigger--senior or master rigger ratings.
Ground instructor--ratings for each subject in which the holder is qualified to give instruction.
Air traffic control tower operator--junior/senior ratings for airport where holder may control air traffic.

* Special ratings shown on pilot certificates represented above; not to be added to total.

1/ Not included in total.

TABLE 7.4

INSTRUMENT RATINGS ISSUED: 1979,1978, 1974

Class of Certificate	1979	1978	1974	Percent Change 1978-1979
Total--all groups	16,651	16,899	19,012	-1
Private pilots--total	10,311	9,690	4,829	+6
Private airplane (only)	9,584	9,032	4,391	+6
Private airplane, private glider	128	127	59	0
Private airplane, commercial glider	6	6	1	0
Private airplane, private helicopter	20	27	7	-25
Private airplane, commercial helicopter	220	225	246	-2
Private airplane, private glider, private helicopter	0	1	0	0
Private airplane, other	353	272	125	+30
Commercial pilots--total	5,602	6,575	13,037	-15
Commercial airplane (only)	4,646	5,588	11,382	-17
Commercial airplane, private glider	70	85	0	-18
Commercial airplane, commercial glider	98	82	116	+15
Commercial airplane, private helicopter	2	6	4	-67
Commercial airplane, commercial helicopter	753	796	1,515	-5
Commercial airplane, private glider, commercial helicopter	4	1	2	+300
Commercial airplane, commercial glider, commercial helicopter	23	13	15	+78
Commercial airplane, other	6	4	3	50
Rotorcraft pilots--total	738	634	1,146	+16
Commercial helicopter	710	620	1,142	+15
Commercial helicopter, airline transport helicopter	21	11	1	+91
Commercial helicopter, private glider	4	1	1	+300
Commercial helicopter, commercial glider	3	1	1	+200
Commercial helicopter, other	0	1	1	0

TABLE 7.5

INSTRUMENT RATINGS HELD, BY CLASS OF CERTIFICATE: DECEMBER 31, 1978 AND 1979

Class of Certificate	1979	1978	Percent Change 1977-1978
Total--all groups	247,096	236,312	+ 5
Private pilots--total	35,528	32,470	+ 9
Private airplane (only)	32,935	30,090	+ 9
Private airplane, private glider	798	730	+ 9
Private airplane, commercial glider	68	57	+19
Private airplane, private helicopter	225	211	+ 7
Private airplane, private glider private helicopter	8	10	-20
Private airplane, commercial helicopter	1,471	1,354	+ 9
Private airplane, private gyroplane	2	2	0
Private airplane, private glider, commercial helicopter	14	10	40
Private airplane, commercial glider, commercial helicopter	6	5	20
Private airplane, other	1	1	0
Commercial pilots--total	144,838	145,268	0
Commercial airplane (only)	123,205	123,301	0
Commercial airplane, private glider	1,760	1,672	+ 5
Commercial airplane, commercial glider	3,342	3,371	- 1
Commercial airplane, private helicopter	129	128	+ 1
Commercial airplane, commercial helicopter	15,638	16,055	- 3
Commercial airplane, private glider, commercial helicopter	144	127	13
Commercial airplane, commercial glider, commercial helicopter	549	540	2
Commercial airplane, commercial gyroplane	19	23	-17
Commercial airplane, commercial helicopter, commercial gyroplane	27	26	+ 4
Commercial airplane, commercial gyroplane, comercial glider	1	2	-50
Commercial airplane, commercial glider, private helicopter	10	8	25
Commercial airplane, commercial gyroplane, commercial helicopter, commercial glider	14	15	- 7
Airline transport pilots--total	63,652	55,881	+14
Airline transport airline	62,976	55,331	+14
Airline transport airplane, airline transport helicopter	676	550	+23
Rotorcraft pilots--total	3,078	2,693	+14
Commercial helicopter	3,032	2,653	+14
Airline transport helicopter	30	30	0
Rotorcraft other	16	10	+60

TABLE 7.6

ACTIVE HELICOPTER PILOTS BY CLASS OF CERTIFICATE:

DECEMBER 31, 1979

Class of Certificate	Number of Certificates Held
Total	28,857
Private helicopter	322
Private gyroplane, private airplane	36
Private helicopter, private airplane	917
Private helicopter, private airplane, private glider	31
Commercial airplane, private helicopter	184
Commercial airplane, commercial gyroplane, commercial glider, commercial helicopter	15
Commercial airplane, commercial glider, private helicopter	12
Private gyroplane	6
Private airplane, commercial glider, commercial helicopter	10
Commercial helicopter	4,733
Private airplane, commercial helicopter	2,656
Commercial airplane, commercial helicopter	18,241
Private airplane, private glider, commercial helicopter	21
Commercial airplane, private glider, commercial helicopter	164
Commercial airplane, commercial glider, commercial helicopter	613
Commercial helicopter, private glider	6
Commercial helicopter, commercial glider	7
Commercial gyroplane, commercial airplane	31
Commercial airplane, commercial gyroplane, commercial glider	3
Commercial airplane, commercial gyroplane, commercial helicopter	33
Commercial gyroplane, commercial helicopter, private airplane	2
Commercial helicopter, commercial gyroplane	2
Airline transport helicopter	142
Airline transport airplane, airline transport helicopter	676

TABLE 7.7

ACTIVE GLIDER PILOTS BY CLASS OF CERTIFICATE:

DECEMBER 31, 1979

Class of Certificate	Number of Certificates Held
Total	18,973
Private glider	5,682
Private airplane, private glider	4,191
Private airplane, private glider, private helicopter	31
Private airplane, private glider, commercial helicopter	21
Commercial airplane, private glider	2,159
Commercial airplane, private glider, commerical helicopter	164
Commercial helicopter, private glider	6
Private airplane, commercial glider	596
Private airplane, commercial glider, commercial helicopter	10
Commercial glider	1,114
Commercial airplane, commercial glider	4,349
Commercial airplane, commercial glider, private helicopter	12
Commercial airplane, commercial glider, commercial helicopter	613
Commercial helicopter, commercial glider	7
Commercial airplane, commercial gyroplane, commercial glider, commercial helicopter	15
Commercial airplane, commercial gyroplane, commercial glider	3

TABLE 7.8

ACTIVE HELICOPTER AND GLIDER PILOTS:

DECEMBER 31, 1975-79

Calendar Year	Total Helicopter Pilots 1/		Total Glider Pilots 2/	
	Number	Percent Change	Number	Percent Change
1979	28,857	- 1	18,973	+ 2
1978	28,890	+ 1	18,610	+ 4
1977	28,566	+ 3	17,933	+ 6
1976	27,816	- 1	16,866	+ 6
1975	27,872	- 3	15,962	+ 6

1/ Includes pilots with ratings to fly helicopters only.
2/ Includes pilots with ratings to fly gliders only.

TABLE 7.9

TOTAL AND INSTRUMENT RATED PILOTS:

DECEMBER 31, 1975-79

Calendar Year	Total Pilots 1/	Instrument Rated Pilots	
		Number	Percent of Total
1979	604,487	247,096	41
1978	593,959	236,312	40
1977	580,422	226,334	39
1976	555,625	211,364	38
1975	551,209	203,954	37

1/ Excludes student pilots.

TABLE 7.10

ACTIVE PILOT CERTIFICATES HELD, BY CATEGORY AND AGE GROUP OF HOLDER: 1979, 1978, 1974

Age Group	Type of Pilot Certificate														
	Total Active Pilots			Student			Private			Commercial			Airline Transport		
	1979	1978	1974	1979	1978	1974	1979	1978	1974	1979	1978	1974	1979	1978	1974
Total . . .	814,667	798,833	733,728	210,180	204,874	180,795	343,276	337,644	305,848	182,097	185,833	192,425	63,652	55,881	41,002
14-15	368	361	173	368	361	173	0	0	0	0	0	0	0	0	0
16-19	33,574	32,295	31,989	25,537	24,203	23,155	7,324	7,445	7,772	468	374	698	0	0	0
20-24	94,928	93,546	90,401	46,260	45,153	44,190	35,731	36,405	33,050	11,227	10,402	11,290	612	437	193
25-29	120,076	118,503	118,111	42,657	41,872	35,611	49,195	47,995	40,444	20,564	21,888	35,316	5,191	4,214	2,862
30-34	133,615	131,012	113,514	33,728	32,722	26,003	51,629	49,989	42,507	32,078	35,006	37,214	12,528	10,005	5,777
35-39	113,478	110,402	95,081	22,858	22,100	17,982	46,046	44,779	39,823	31,949	32,582	29,589	10,571	9,160	6,398
40-44	89,250	89,250	87,899	14,323	14,411	13,764	38,511	38,271	40,550	24,922	26,062	25,276	10,109	9,208	7,113
45-49	79,011	78,930	75,211	10,840	11,058	9,946	37,346	38,629	42,829	20,944	20,347	15,924	8,641	7,665	5,389
50-54	63,685	63,994	66,610	7,448	7,232	5,730	36,250	35,985	30,712	13,297	14,178	21,441	5,506	5,482	7,729
55-59	51,464	48,877	34,828	3,849	3,604	2,802	23,516	21,794	16,601	16,143	15,754	10,610	6,930	6,745	4,179
60 and over	35,218	31,663	19,911	2,312	2,158	1,439	17,728	16,354	11,560	10,505	9,240	5,067	3,564	2,965	1,362
Average Age	37	37	36	30	31	30	36	38	38	40	40	38	42	43	43

Age Group	Type of Pilot Certificates									Flight Instructor 1/		
	Helicopter (Only)			Glider (Only)			Lighter-than-air					
	1979	1978	1974	1979	1978	1974	1979	1978	1974	1979	1978	1974
Total . . .	5,218	374	5,647	6,796	6,541	4,824	3,448	3,186	3,187	54,398	52,201	42,418
14-15	0	0	0	0	0	0	0	0	0	0	0	0
16-19	9	10	3	214	243	339	22	20	22	153	137	146
25-29	1,116	1,254	2,982	1,105	1,090	690	248	190	206	8,357	7,972	8,626
30-34	2,214	2,023	1,140	1,121	1,011	550	317	256	323	10,532	10,388	8,514
35-39	890	733	426	791	706	457	373	342	406	8,694	8,401	6,082
40-44	392	335	222	586	554	443	407	409	531	6,595	6,617	4,776
45-49	178	167	108	542	547	504	520	519	511	5,276	4,934	3,452
50-54	94	71	39	611	587	438	479	459	521	3,483	3,491	3,717
55-59	32	31	16	514	487	302	480	462	318	3,419	3,261	2,079
60 and over	13	11	8	577	481	233	519	454	242	2,609	2,368	1,343
Average Age	33	33	29	38	35	36	48	46	44	38	38	33

1/ Not included in total active pilots.

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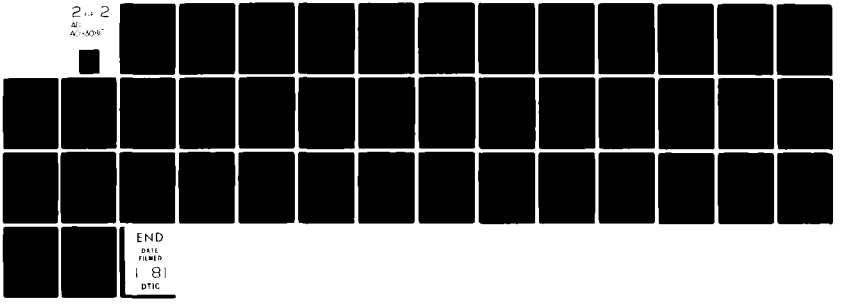

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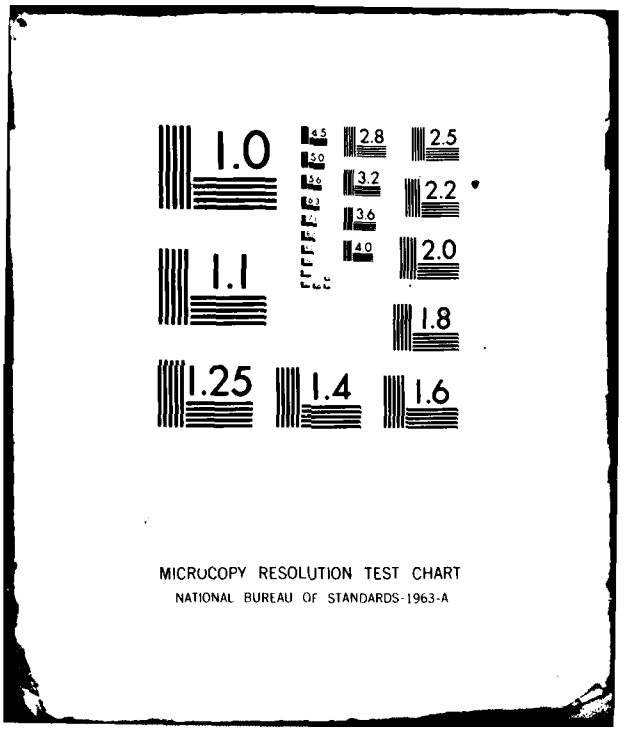
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TABLE 7.11

ACTIVE NONPILOT CERTIFICATES HELD, BY CATEGORY AND AGE GROUP OF HOLDER: 1979, 1978, 1974

Age Group	Type of Pilot Certificates								
	Control Tower Operator			Flight Navigator			Flight Engineer		
	1979	1978	1974	1979	1978	1974	1979	1978	1974
Total . . .	25,232	25,388	23,342	1,994	2,092	2,509	36,869	33,028	26,955
16-19	40	40	60	0	0	0	0	0	0
20-24	2,449	2,925	3,063	0	0	0	604	436	132
24-29	4,857	5,289	5,825	1	1	9	2,696	2,156	1,585
30-34	6,538	6,055	3,602	11	13	224	7,607	5,868	7,107
35-39	3,631	3,362	4,032	206	304	611	8,233	8,658	7,924
40-44	3,152	3,316	3,367	554	575	468	8,194	7,504	4,903
45-49	2,632	2,576	1,296	403	353	307	4,956	4,202	2,181
50-54	896	816	1,340	266	280	474	2,043	1,936	2,121
55-59	743	763	615	344	385	348	1,901	1,763	835
60 and over .	294	246	142	209	181	68	635	505	167
Average Age .	35	35	35	48	48	45	40	40	39

TABLE 7.12

ACTIVE PILOTS AND FLIGHT INSTRUCTORS BY FAA REGION AND STATE:

DECEMBER 31, 1979

FAA Region and State	Total Pilots	Student	Private	Commercial	Airline Transport	Miscellaneous 2/	Flight Instructor 3/
Total	814,667	210,180	343,276	182,097	63,652	15,462	54,398
United States--total	800,622	206,568	340,586	177,797	60,540	15,131	53,888
Alaskan--total	10,809	2,580	4,750	2,645	726	108	683
Central--total	51,254	12,486	25,359	10,205	2,600	604	3,113
Iowa	12,174	3,021	6,655	2,074	299	125	671
Kansas	14,781	3,526	7,334	2,987	761	173	843
Missouri	16,127	3,926	7,189	3,439	1,318	255	1,146
Nebraska	8,172	2,013	4,181	1,705	222	51	453
Eastern--total	103,400	28,095	41,867	23,467	7,489	2,482	7,548
Delaware	1,892	443	791	445	186	27	160
District of Columbia .	804	212	337	191	29	35	43
Maryland	10,113	2,545	4,382	2,372	605	209	689
New Jersey	16,716	4,383	6,633	3,546	1,768	386	1,312
New York	31,752	9,451	12,977	6,532	1,856	936	2,231
Pennsylvania	22,841	6,290	9,827	4,646	1,583	495	1,818
Virginia	16,263	3,852	5,654	5,108	1,308	341	1,078
West Virginia	3,019	919	1,266	627	154	53	217
Great Lakes--total . .	138,964	37,063	65,825	26,268	7,756	2,052	9,222
Illinois	34,355	8,878	15,605	6,601	2,660	611	2,408
Indiana	15,465	4,230	7,522	2,949	574	190	1,036
Michigan	26,102	7,224	12,723	4,587	1,143	425	1,697
Minnesota	18,870	4,700	8,953	3,699	1,333	185	1,085
Ohio	29,600	7,939	13,889	5,904	1,368	500	2,123
Wisconsin	14,572	4,092	7,133	2,528	678	141	873
New England--total . .	34,986	9,691	13,741	7,246	3,567	741	2,231
Connecticut	9,965	2,541	3,487	2,080	1,629	228	720
Maine	3,983	1,120	1,694	936	173	60	212
Massachusetts	13,338	4,072	5,594	2,502	863	307	811
New Hampshire	4,255	964	1,487	1,005	712	87	255
Rhode Island	1,795	566	737	377	93	22	121
Vermont	1,650	428	742	346	97	37	112
Northwest--total . . .	46,941	12,119	20,624	10,379	3,077	742	3,268
Idaho	6,122	1,631	2,818	1,307	286	80	434
Oregon	15,342	4,357	7,394	2,919	491	181	969
Washington	25,477	6,131	10,412	6,153	2,300	481	1,865
Pacific Region--total .	3,972	973	1,112	1,172	535	180	280
Rocky Mountain--total .	42,468	11,434	18,051	9,018	3,001	964	2,749
Colorado	19,493	5,066	7,254	4,263	2,192	718	1,446
Montana	5,903	1,561	2,905	1,195	194	48	296
North Dakota	4,012	1,083	1,848	991	63	27	239
South Dakota	3,823	1,084	1,844	763	90	42	202
Utah	6,063	1,693	2,727	1,197	345	101	382
Wyoming	3,174	947	1,473	609	117	28	184

TABLE 7.12 (CONTINUED)

ACTIVE PILOTS AND FLIGHT INSTRUCTORS BY FAA REGION AND STATE:

DECEMBER 31, 1979

FAA REGION AND STATE	TOTAL PILOTS	STUDENT	PRIVATE	COMMERCIAL	AIRLINE TRANSPORT	MISCELLANEOUS 2/	FLIGHT INSTRUCTOR 3/
SOUTHERN--TOTAL	123,527	32,006	47,607	30,630	10,905	2,379	8,282
ALABAMA	10,414	2,669	4,077	2,883	415	370	864
FLORIDA	49,237	12,039	18,657	12,608	5,168	765	3,324
GEORGIA	17,809	4,490	6,024	4,395	2,569	331	1,060
KENTUCKY	6,528	1,958	2,802	1,311	258	199	426
MISSISSIPPI	6,248	1,696	2,440	1,764	271	77	428
NORTH CAROLINA	13,898	3,904	5,825	3,146	780	243	864
SOUTH CAROLINA	7,186	2,018	2,804	1,877	391	96	488
TENNESSEE	12,207	3,232	4,978	2,646	1,053	298	828
SOUTHWEST--TOTAL . . .	101,274	25,446	40,090	25,261	8,659	1,818	7,294
LOUISIANA	11,086	2,988	4,016	3,114	675	293	768
OKLAHOMA	14,965	3,822	6,906	3,359	696	182	997
TEXAS	61,044	14,932	23,177	15,179	6,658	1,098	4,590
NEW MEXICO	6,947	1,814	2,965	1,656	323	189	456
ARKANSAS	7,232	1,890	3,026	1,953	307	56	483
WESTERN---TOTAL	143,027	34,675	61,560	31,506	12,225	3,061	9,218
CALIFORNIA	120,180	28,933	52,239	26,205	10,245	2,558	7,623
ARIZONA	16,545	4,253	6,904	3,884	1,096	408	1,129
NEVADA	6,302	1,489	2,417	1,417	884	95	466
OUTSIDE U.S.--TOTAL . .	14,045	3,612	2,690	4,300	3,112	331	510

NOTE: PUERTO RICO AND VIRGIN ISLANDS ARE INCLUDED IN OUTSIDE U.S. TOTAL.

1/ INCLUDES OUTSIDE U.S.

2/ INCLUDES HELICOPTER, GLIDER, AND LIGHTER-THAN-AIR.

3/ NOT INCLUDED IN TOTAL.

TABLE 7.13

ACTIVE NONPILOT AIRMEN CERTIFICATES HELD, BY FAA REGION AND STATE:

DECEMBER 31, 1979 1/

FAA Region and State	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Control Tower Operator	Flight Navigator	Flight Engineer
Total	377,213	237,611	9,381	59,680	6,446	25,232	1,994	36,869
United States--total	365,399	229,824	9,252	58,745	5,110	24,988	1,896	35,584
Alaskan Region--total	3,623	2,246	125	608	115	342	4	183
Central--total	20,288	13,824	433	3,716	135	1,110	11	1,059
Iowa	2,779	1,750	89	668	8	178	0	86
Kansas	6,037	4,175	108	1,053	36	332	1	332
Missouri	9,665	6,803	171	1,565	87	435	6	598
Nebraska	1,807	1,096	65	430	4	165	4	43
Eastern--total	63,265	42,820	1,547	9,189	1,428	3,875	362	4,044
Delaware	964	620	23	150	5	73	7	86
District of Columbia	579	373	26	131	17	20	0	12
Maryland	3,306	1,880	135	689	19	245	13	325
New Jersey	10,625	7,127	237	1,504	87	350	110	1,210
New York	27,258	19,473	374	3,391	1,097	1,682	133	1,108
Pennsylvania	13,843	10,150	327	2,079	96	585	55	551
Virginia	5,653	2,618	377	1,006	104	792	43	713
West Virginia	1,037	579	48	239	3	128	1	39
Great Lakes--total	47,858	29,090	1,219	9,386	468	3,185	63	4,447
Illinois	14,522	8,593	276	2,623	235	781	20	1,994
Indiana	4,704	2,896	192	917	21	460	7	211
Michigan	7,686	4,827	197	1,728	45	568	10	311
Minnesota	7,847	4,829	140	1,232	102	358	11	1,175
Ohio	9,547	5,901	287	2,048	46	768	12	485
Wisconsin	3,552	2,044	127	838	19	250	3	271
New England--total	18,672	11,954	389	2,782	135	969	217	2,226
Connecticut	5,286	3,030	84	757	40	187	152	1,036
Maine	1,205	692	40	247	12	116	10	88
Massachusets	8,853	6,637	179	1,166	62	336	22	451
New Hampshire	1,848	707	28	287	13	220	27	566
Rhode Island	945	600	46	190	5	50	4	50
Vermont	535	288	12	135	3	60	2	35
Northwest--total	16,570	9,852	706	2,587	187	1,083	140	2,015
Idaho	1,627	938	143	307	10	143	7	79
Oregon	3,400	2,102	228	634	19	194	37	186
Washington	11,543	6,812	335	1,646	158	746	96	1,750
Pacific Region--total	2,897	1,959	54	277	110	308	18	171
Rocky Mountain--total	14,108	7,594	570	2,875	155	1,052	98	1,814
Colorado	7,940	4,100	156	1,530	131	450	36	1,537
Montana	1,724	913	257	396	3	104	4	47
North Dakota	876	509	23	187	2	136	0	19
South Dakota	878	506	26	224	1	93	0	28
Utah	1,855	1,015	81	364	12	225	6	152
Wyoming	835	551	27	174	6	44	2	31

TABLE 7.13 (CONTINUED)

ACTIVE NONPILOT AIRMEN CERTIFICATES HELD, BY FAA REGION AND STATE:

DECEMBER 31, 1979 1/

FAA REGION AND STATE	TOTAL NONPILOT AIRMEN	MECHANIC	PARACHUTE RIGGER	GROUND INSTRUCTOR	DISPATCHER	CONTROL TOWER OPERATOR	FLIGHT NAVIGATOR	FLIGHT ENGINEER
SOUTHERN--TOTAL	58,915	34,340	1,691	9,104	1,084	5,650	295	6,751
NORTH CAROLINA	4,360	2,314	342	836	45	614	12	197
SOUTH CAROLINA	2,070	922	85	465	6	423	7	162
GEORGIA	11,576	6,575	285	1,308	200	768	21	2,419
FLORIDA	27,723	16,984	470	4,090	652	1,974	229	3,324
MISSISSIPPI	1,760	848	42	402	3	379	3	83
ALABAMA	5,655	3,718	136	875	100	708	8	110
TENNESSEE	4,010	2,044	165	780	71	551	13	386
KENTUCKY	1,761	935	166	348	7	233	2	70
SOUTHWEST--TOTAL	46,178	28,584	1,050	7,906	333	3,608	97	4,600
LOUISIANA	4,011	2,474	103	693	25	401	3	312
OKLAHOMA	10,509	7,882	186	1,600	20	573	15	233
TEXAS	27,789	16,141	610	4,704	269	2,085	70	3,910
NEW MEXICO	1,939	992	84	442	12	331	7	71
ARKANSAS	1,930	1,095	67	467	7	218	2	74
WESTERN--TOTAL	73,025	47,561	1,468	10,315	960	3,806	641	8,274
CALIFORNIA	64,672	42,648	1,231	8,771	912	3,071	545	7,494
ARIZONA	6,208	4,012	181	1,121	33	487	21	353
NEVADA	2,145	901	56	423	15	248	75	427
OUTSIDE U.S.--TOTAL	11,814	7,787	129	935	1,336	244	98	1,285

NOTE: PUERTO RICO AND VIRGIN ISLANDS ARE INCLUDED IN OUTSIDE U.S. TOTAL.

1/ DATA FOR CONTROL TOWER OPERATORS, FLIGHT ENGINEERS, AND FLIGHT NAVIGATORS REPRESENT TOTAL ACTIVE RATINGS HELD. DATA FOR DISPATCHERS, MECHANICS, PARACHUTE RIGGERS, AND GROUND INSTRUCTORS, REPRESENT TOTAL RATINGS ISSUED TO DATE. THESE RATINGS RATAIN THEIR VALIDITY.

VIII. GENERAL AVIATION AIRCRAFT

Beginning in 1977, General Aviation Aircraft Activity information was obtained using the Ceneral Aviation Activity and Avionics Survey. Heretofore, the activity data were collected from each owner of a registered aircraft using the Aircraft Registration, Eligibility, Identification, and Activity report. Like the old form the survey collects data relative to flight hours, airframe hours and the avionics equipment on board the aircraft. In addition, the survey collects information about the number of hours flown under Instrument Flight Rules, fuel consumption rates, and the state where the aircraft is based.

The sample of 31,208 aircraft was selected from approximately 234,000 registered general aviation aircraft. The sample is a scientifically designed random sample which represents all general aviation aircraft registered in the United States.

Because the estimates are derived from a sample--not the total population of aircraft--a certain amount of sampling error is introduced. The user must consider this error along with the estimate itself when making an inference or drawing any conclusions about the aircraft population. Although the exact value of the sample error is unknown, a quantity known as the standard error is used to approximate it. Using the standard error one can develop an interval within which the true population estimate will lie with a known probability. The probability that the true value lies within the interval depends on the width of the interval, i.e., the estimate

plus or minus 1, 2, or 3 times the standard error. The table below shows selected interval widths and their corresponding confidence.

Width of Interval	Approximate Confidence That Interval Includes True Value
1 standard error	68%
2 standard errors	95%
3 standard errors	99%

If, for example, the estimate for the total number of active piston powered rotorcraft were 2,658 and the standard error were 176, then the 95% confidence interval would be 2,658 $\pm$ 2(176) or (2306, 3010). One would say that there is a 95% chance that the number of active piston powered rotocraft lies between 2306 and 3010.

In some tables the standard error is expressed as a percent. To calculate the standard error multiply the estimate by the percentage. To derive the 95% confidence interval proceed as before. For example, total hours flown is shown as 35,792 thousand hours and the percentage standard error is 3.0%. The 95% confidence interval is:

$$35{,}792 \pm (2 \times 3\% \times 35{,}792) =$$

$$35{,}792 \pm 2148 =$$

$$(33{,}644;\ 37{,}940)$$

The standard error, percent standard error, or a code for the standard error is shown for each estimate made from the sample in this chapter.

More detailed estimates and a more detailed discussion of the survey and its methodology are available in 1978 General Aviation Activity and Avionics Survey.

TABLE 8.1

ACTIVE GENERAL AVIATION AIRCRAFT BY AIRCRAFT TYPE AND PRIMARY USE
(STANDARD ERROR IS SHOWN IN PARENTHESES)
1978

Aircraft Type	Total Active	Executive	Business	Personal	Aerial Application	Instructional	Air Taxi	Industrial	Rental	Other	Inactive
Fixed-Wing--Total	189,433	12,146	41,986	92,814	6,630	13,995	6,701	1,649	7,803	5,306	31,656
	(1,261)	(A)	(A)	(A)	(A)	(B)	(B)	(C)	(B)	(B)	(A)
Piston--Total	183,823	7,979	41,623	92,756	6,617	13,972	6,086	1,631	7,768	5,387	31,156
	(1,258)	(A)	(A)	(A)	(A)	(B)	(B)	(C)	(B)	(B)	(A)
One Engine	160,651	3,214	31,548	89,847	6,335	13,438	2,770	1,388	7,419	4,687	28,289
	(1,214)	(C)	(A)	(A)	(A)	(B)	(C)	(D)	(B)	(B)	(A)
Two Engine	22,950	4,761	10,056	2,907	198	529	3,269	241	319	666	2,709
	(329)	(A)	(A)	(B)	(D)	(D)	(B)	(D)	(D)	(C)	(B)
Other Piston	221	3	18	1	83	4	45	1	29	34	157
	(10)	(D)	(D)	(D)	(A)	(D)	(A)	(D)	(B)	(C)	(A)
Turboprop--Total	3,130	2,195	305	37	8	0	444	9	10	119	166
	(69)	(A)	(C)	(D)	(A)	(A)	(B)	(D)	(B)	(D)	(D)
Two Engine	3,073	2,191	295	36	0	0	438	7	0	103	116
	(68)	(A)	(C)	(D)	(A)	(A)	(B)	(D)	(A)	(D)	(D)
Other Turboprop	56	3	9	1	8	0	5	1	10	15	50
	(3)	(C)	(C)	(D)	(A)	(A)	(B)	(D)	(B)	(B)	(A)
Turbojet--Total	2,480	1,971	57	19	4	22	170	8	25	139	332
	(44)	(A)	(D)	(D)	(D)	(D)	(C)	(D)	(C)	(B)	(B)
Two Engine	2,115	1,760	41	12	4	18	153	5	2	116	64
	(27)	(A)	(D)	(D)	(D)	(D)	(C)	(D)	(D)	(C)	(D)
Other Turbojet	364	211	15	7	0	3	17	2	23	82	268
	(34)	(A)	(D)	(C)	(A)	(D)	(D)	(D)	(C)	(B)	(B)
Rotorcraft--Total	5,315	487	641	512	785	269	1,215	402	130	869	2,365
	(119)	(C)	(B)	(B)	(B)	(C)	(B)	(B)	(D)	(C)	(A)
Piston	2,822	66	441	478	739	262	139	299	23	370	2,204
	(115)	(D)	(B)	(B)	(B)	(C)	(D)	(C)	(D)	(C)	(A)
Turbine	2,492	421	199	34	45	7	1,075	103	106	499	161
	(30)	(D)	(C)	(D)	(D)	(D)	(B)	(D)	(D)	(D)	(B)
Other--Total	4,028	32	181	2,881	1	476	19	7	255	173	1,148
	(75)	(D)	(C)	(A)	(D)	(B)	(D)	(D)	(C)	(B)	(A)
Total All Aircraft	198,778	12,666	42,809	96,209	7,418	14,742	7,936	2,059	8,189	6,749	35,169
	(1,269)	(780)	(2,193)	(2,634)	(237)	(1,595)	(776)	(445)	(1,335)	(919)	(1,269)

NOTE: Row and column summation may differ from printed totals due to estimation procedures.

Standard Error

Greater Than	Less Than or Equal To	Code
0%	10%	A
10%	20%	B
20%	30%	C
30%		D

TABLE 8.2

ACTIVE GENERAL AVIATION AIRCRAFT BY AIRCRAFT TYPE
1973-1978

	1978 (Standard Error)	1977 (Standard Error)	1976 (R)	1975 (R)	1974 (R)	1973 (R)
Fixed-Wing--Total	189,433 (1,261)	175,951 (1,061)	170,393	161,183	154,911	147,995
Piston--Total	183,823 (1,258)	170,783 (1,015)	166,059	156,936	151,255	144,766
One Engine	160,651 (1,214)	149,300 (1,002)	144,752	136,639	131,512	126,074
Two Engine	22,950 (329)	21,301 (165)	21,111	20,119	19,553	18,502
Other Piston	221 (10)	182 (11)	196	178	190	190
Turboprop--Total	3,130 (69)	2,890 (20)	2,453	2,504	2,095	1,849
Two Engine	3,073 (68)	2,825 (20)	2,396	2,440	2,020	1,777
Other Turboprop	56 (3)	64 (4)	57	64	75	72
Turbojet--Total	2,480 (44)	2,277 (22)	1,881	1,743	1,561	1,380
Two Engine	2,115 (27)	1,959 (19)	1,692	1,547	1,385	1,196
Other Turbojet	364 (34)	318 (10)	189	196	176	184
Rotorcraft--Total	5,315 (119)	4,726 (179)	4,425	4,054	3,597	3,115
Piston	2,822 (115)	2,658 (176)	2,701	2,498	2,315	2,122
Turbine	2,492 (30)	2,067 (27)	1,724	1,556	1,282	993
Other--Total	4,028 (75)	3,616 (69)	3,146	2,812	2,525	2,201
Total All Aircraft	198,778 (1,269)	184,294 (1,034)	177,964	168,049	161,033	153,311

NOTE: COLUMNS MAY NOT ADD TO TOTALS DUE TO ROUNDING AND ESTIMATION PROCEDURES.
(R) : FAA REVISED DATA AS OF DECEMBER, 1978

TABLE 8.3

ACTIVE GENERAL AVIATION AIRCRAFT TOTAL HOURS FLOWN
BY AIRCRAFT TYPE AND PRIMARY USE
(PERCENT STANDARD ERROR IS SHOWN IN PARENTHESES)
1978

Aircraft Type	Total	Executive	Business	Personal	Aerial Application	Instructional	Air Taxi	Industrial	Rental	Other
Fixed-Wing--Total	36,843,728	4,610,341	7,862,290	9,406,561	1,846,796	4,825,738	3,586,995	490,684	3,167,153	916,873
	(3.2%)	(7.5%)	(6.3%)	(5.6%)	(8.9%)	(15.4%)	(11.9%)	(28.2%)	(18.5%)	(22.2%)
Piston--Total	34,043,199	2,826,413	7,705,837	9,392,684	1,846,024	4,815,000	2,896,785	485,586	3,143,738	814,852
	(3.5)	(11.4)	(6.4)	(5.6)	(8.9)	(15.4)	(13.2)	(28.5)	(18.6)	(24.2)
One-Engine	27,857,308	1,253,115	5,613,529	9,039,967	1,799,792	4,693,160	1,210,388	411,465	3,024,167	717,393
	(4.1)	(23.5)	(8.1)	(5.8)	(9.0)	(15.9)	(23.8)	(32.7)	(19.4)	(27.4)
Two-Engine	6,082,379	1,574,862	2,081,376	352,195	39,005	122,779	1,620,292	74,194	95,899	96,498
	(5.0)	(10.3)	(7.6)	(15.0)	(54.1)	(37.7)	(14.0)	(40.2)	(44.9)	(23.7)
Other Piston	103,511	243	7,495	17	6,868	90	63,570	43	24,302	1,101
	(6.7)	(41.5)	(35.2)	(63.7)	(10.0)	(40.3)	(5.2)	(87.7)	(19.3)	(49.6)
Turboprop--Total	1,606,283	884,846	111,301	8,566	400	0	550,288	3,971	8,847	33,508
	(5.0)	(6.4)	(27.1)	(60.8)	(0.0)	(0.0)	(15.2)	(87.4)	(13.9)	(42.8)
Two-Engine	1,581,903	883,559	107,386	8,546	0	0	546,036	3,957	0	27,675
	(5.1)	(6.4)	(28.0)	(63.3)	(0.0)	(0.0)	(15.3)	(104.2)	(0.0)	(49.2)
Other Turboprop	24,379	1,283	3,939	15	400	0	3,883	51	8,847	5,874
	(12.8)	(28.0)	(33.3)	(56.0)	(0.0)	(0.0)	(19.3)	(56.0)	(13.9)	(25.8)
Turbojet--Total	1,194,246	899,290	43,230	5,355	432	10,691	132,449	1,187	14,377	68,938
	(4.5)	(4.5)	(42.7)	(35.7)	(123.5)	(54.4)	(27.6)	(76.8)	(24.2)	(20.9)
Two-Engine	1,018,717	806,050	29,519	4,677	432	9,306	115,379	1,038	904	49,866
	(4.3)	(4.8)	(57.8)	(55.3)	(123.5)	(64.9)	(30.5)	(112.1)	(5.8)	(29.4)
Other Turbojet	175,528	92,082	14,015	157	0	1,218	17,473	144	13,500	17,306
	(17.1)	(13.8)	(30.2)	(24.1)	(0.0)	(46.9)	(33.0)	(33.4)	(25.9)	(35.0)
Rotorcraft--Total	2,227,651	267,242	138,284	27,012	219,056	100,262	828,107	211,062	73,595	365,431
	(7.0)	(31.3)	(22.5)	(13.0)	(18.0)	(26.0)	(19.7)	(23.8)	(38.3)	(25.4)
Piston	806,410	16,562	95,163	20,256	207,184	99,539	379.71	151,706	5,535	170,960
	(9.8)	(52.6)	(29.9)	(13.7)	(18.9)	(26.5)	(35.6)	(28.7)	(58.8)	(27.8)
Turbine	1,421,241	249,952	43,120	6,526	11,889	801	787,900	59,191	67,920	195,050
	(9.5)	(35.0)	(29.8)	(59.6)	(39.2)	(75.4)	(21.2)	(43.4)	(45.1)	(39.5)
Other--Total	337,887	1,725	13,560	170,656	113	85,757	1,789	927	45,272	17,798
	(5.8)	(62.9)	(26.4)	(5.6)	(76.1)	(19.4)	(81.9)	(76.1)	(22.6)	(25.2)
Total All Aircraft	39,289,796	4,881,684	8,014,097	9,600,700	2,065,959	5,009,052	4,423,601	702,403	3,283,903	1,308,397
	(3.0)	(12.4)	(20.4)	(24.4)	(5.3)	(12.7)	(11.3)	(1.8)	(8.4)	(3.3)

Note: Row and column summations may differ from printed totals due to estimation procedures.

TABLE 8.4

ACTIVE GENERAL AVIATION AIRCRAFT TOTAL HOURS FLOWN BY AIRCRAFT TYPE
1973-1978
(HOURS IN THOUSANDS)

	1978 (STANDARD ERROR)	1977 (STANDARD ERROR)	1976 (R)	1975 (R)	1974 (R)	1973 (R)
FIXED-WING--TOTAL	36,844 (1,179)	33,679 (1,064)	31,950	30,298	29,758	28,599
PISTON--TOTAL	34,043 (1,192)	30,965 (1,061)	29,713	28,165	27,760	26,798
ONE-ENGINE	27,857 (1,142)	24,916 (1,036)	24,328	22,914	22,430	21,747
TWO-ENGINE	6,082 (304)	5,951 (227)	5,301	5,167	5,235	4,967
OTHER PISTON	104 (7)	96 (5)	84	84	95	84
TURBOPROP--TOTAL	1,606 (80)	1,549 (71)	1,326	1,307	1,245	1,117
TWO-ENGINE	1,582 (81)	1,517 (70)	1,306	1,271	1,203	1,080
OTHER TURBOPROP	24 (3)	32 (5)	20	36	42	37
TURBOJET--TOTAL	1,194 (54)	1,165 (50)	911	826	753	684
TWO-ENGINE	1,019 (44)	1,043 (49)	844	755	690	595
OTHER TURBOJET	176 (30)	122 (11)	67	71	63	89
ROTORCRAFT--TOTAL	2,228 (156)	1,868 (129)	1,703	1,482	1,426	1,169
PISTON	806 (79)	609 (90)	753	686	729	654
TURBINE	1,421 (135)	1,259 (93)	950	796	697	515
OTHER--TOTAL	338 (20)	245 (16)	270	244	227	207
TOTAL ALL AIRCRAFT	39,290 (1,179)	35,791 (1,073)	33,922	32,024	31,413	29,974

NOTE: COLUMNS MAY NOT ADD TO TOTALS DUE TO ROUNDING AND ESTIMATION PROCEDURES.
(R) : FAA REVISED DATA AS OF DECEMBER, 1978.

TABLE 8.5

ACTIVE GENERAL AVIATION AIRCRAFT AVERAGE HOURS FLOWN BY AIRCRAFT TYPE
1973-1978

	1978 (Standard Error)	1977 (Standard Error)	1976	1975	1974	1973
Fixed-Wing--Total	193.7 (5.8)	191.3 (5.9)	187.5	188.0	192.1	193.2
Piston--Total	184.3 (5.9)	181.3 (6.1)	178.9	179.5	183.5	185.1
One-Engine	172.4 (6.6)	166.5 (6.8)	168.1	167.7	170.6	172.5
Two-Engine	263.7 (12.3)	280.4 (10.4)	251.1	256.8	267.7	268.5
Other Piston	477.4 (22.0)	528.8 (21.3)	428.6	471.9	500.0	442.1
Turboprop--Total	509.2 (23.4)	533.4 (23.5)	540.6	522.0	594.3	604.1
Two-Engine	510.7 (23.8)	534.5 (24)	545.1	520.9	595.5	607.8
Other Turboprop	424.8 (6.6)	481.9 (8.5)	350.9	562.5	560.0	513.9
Turbojet--Total	475.2 (17.9)	509.0 (20.2)	484.3	473.9	482.4	495.7
Two-Engine	481.1 (19.1)	527.7 (22.4)	498.8	488.0	498.2	497.5
Other Turbojet	432.1 (51.1)	385.0 (42.2)	354.5	362.2	358.0	483.7
Rotorcraft--Total	422.1 (28.5)	396.3 (25.5)	384.9	365.6	396.4	375.3
Piston	285.6 (23.6)	230.5 (29.6)	278.8	274.6	314.9	308.2
Turbine	571.0 (53.8)	608.3 (44.1)	551.0	511.6	543.7	518.6
Other--Total	83.7 (4.2)	67.8 (4.2)	85.8	86.8	89.9	94.0
Total All Aircraft	197.7 (5.6)	194.2 (5.7)	190.6	190.6	195.1	195.5

Note: Columns may not add to totals due to rounding and estimation procedures.

TABLE 8.6

ACTIVE GENERAL AVIATION AIRCRAFT AND HOURS FLOWN
BY FAA REGION AND STATE OF BASED AIRCRAFT
1978

FAA Region and State	Active Aircraft		Hours Flown	
	Aircraft	Standard Error	Hours (000)	Standard Error (000)
Total	198,778	1,269	39,409	1,199
New England--total	7,518	1,048	1,561	283
Connecticut	1,439	396	329	139
Maine	1,200	446	214	95
Massachusetts	2,854	691	585	219
New Hampshire	1,173	425	213	102
Rhode Island	330	225	77	54
Vermont	519	255	107	70
Eastern--total	23,786	1,854	4,641	491
Delaware	633	322	111	86
District of Columbia	44	35	20	19
Maryland	2,556	637	433	155
New Jersey	4,167	864	822	219
New York	6,272	970	1,169	235
Pennsylvania	5,867	963	1,104	281
Virginia	3,239	777	787	255
West Virginia	1,006	408	179	75
Great Lakes--total	34,724	2,229	6,420	644
Illinois	7,269	1,096	1,606	200
Indiana	4,198	826	629	152
Michigan	7,192	1,311	1,422	230
Minnesota	4,694	862	730	192
Ohio	7,143	1,074	1,229	296
Wisconsin	4,226	801	793	185
Central--total	13,782	1,398	2,629	346
Iowa	3,198	709	702	218
Kansas	3,973	714	754	194
Missouri	3,949	808	624	156
Nebraska	2,661	643	544	164
Southern--total	29,668	1,888	6,396	558
Alabama	2,631	572	658	206
Florida	9,815	907	1,963	253
Georgia	3,540	797	773	349
Kentucky	1,812	568	279	110
Mississippi	2,503	639	529	150
North Carolina	4,193	834	968	308
Puerto Rico	308	216	129	62
South Carolina	1,611	509	339	120
Tennessee	3,113	660	583	117

TABLE 8.6 (CONTINUED)

ACTIVE GENERAL AVIATION AIRCRAFT AND HOURS FLOWN
BY FAA REGION AND STATE OF BASED AIRCRAFT
1978

FAA REGION AND STATE	ACTIVE AIRCRAFT		HOURS FLOWN	
	AIRCRAFT	STANDARD ERROR	HOURS (000)	STANDARD ERROR (000)
SOUTHWEST--TOTAL . . .	26,763	1,780	6,258	638
ARKANSAS	2,503	630	662	231
LOUISIANA	3,744	768	1,179	302
NEW MEXICO	1,925	506	505	223
OKLAHOMA	3,359	588	539	125
TEXAS	15,231	1,360	3,397	508
ROCKY MOUNTAIN--TOTAL .	12,248	1,304	2,319	312
COLORADO	4,445	873	967	257
MONTANA	2,214	571	314	90
NORTH DAKOTA	1,645	493	314	136
SOUTH DAKOTA	1,372	410	236	81
UTAH	1,544	451	334	140
WYOMING	1,026	294	180	60
WESTERN---TOTAL	30,880	1,830	6,317	813
ARIZONA	4,626	868	1,033	316
CALIFORNIA	24,371	1,617	4,818	749
NEVADA	1,882	445	441	153
NORTHWEST--TOTAL . . .	13,858	1,502	2,518	391
IDAHO	2,123	520	372	148
OREGON	5,435	944	925	219
WASHINGTON	6,296	1,114	1,227	276
ALASKAN REGION--TOTAL .	5,799	675	1,137	145
PACIFIC--TOTAL	498	265	212	129
HAWAII	475	262	202	128
OTHER U.S. TERRITORIES.	110	116	45	38
FOREIGN--TOTAL (1) . .	103	84	30	26

NOTE: COLUMN TOTALS MAY DIFFER FROM PRINTED TOTALS DUE TO ESTIMATION PROCEDURES.

(1) INCLUDES EUROPEAN REGION

IX. AIRCRAFT ACCIDENTS

The data presented in this chapter were obtained from the following sources:

Accidents: National Transportation Safety Board.
Air Carrier Miles Flown: National Transportation Safety Board.
Estimated General Aviation Hours and Miles Flown: Federal Aviation Administration.

As defined by the National Transportation Safety Board, an aircraft accident is: "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 such time as 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."

Fatal injury means any injury which results in death within 7 days of the accident.

Operator means any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.

Serious injury means any injury which (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) involves lacerations which cause severe hemorrhages, nerve, muscle, or tendon damage; (4) involves injury to any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

Substantial damage:

(1) Except as provided in subparagraph (2) of this paragraph, substantial damage means damage or structural failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component.

(2) Engine failure, damage limited to an engine, bent fairings or cowling, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, damage to landing gear, wheels, tires, flaps, engine accessories, brakes or wingtips are not considered substantial damage for the purpose of this part.

Commencing in 1968, general aviation accidents cannot be compared with earlier years because of an amendment to the definition of substantial damage.

Prior to January 1, 1968, the definition of substantial damage was:

(1) Except as provided in subparagraph (ii) of this paragraph:

(i) Substantial damage in aircraft of 12,500 pounds maximum certified takeoff weight or less means damage or structural failure reasonably estimated to cost $300 or more to repair.

(ii) Substantial damage in aircraft of more than 12,500 pounds maximum certified takeoff weight means damage or structural failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repairs or replacement of the affected component.

(2) Engine failure, damage limited to an engine, bent fairings, or cowling, dented skin, small puncture holes in the skin or fabric, taxiing damage to propeller blades, damage to tires, engine accessories, brakes or wingtips are not considered substantial damage for the purpose of this part.

More detailed accident data may be obtained from the National Transportation Safety Board, Bureau of Technology.

TABLE 9.1

AIRCRAFT ACCIDENTS, FATALITIES AND FATALITY RATE --
U.S. AIR CARRIER OPERATIONS: 1979*

Air Carrier and Operation	Number of Accidents		Number of Fatalities
	Total	Fatal	
Total--All Operations	33	6	353
Certificated Route Air Carriers	26	5	350
Supplemental Air Carriers	1	1	3
Commercial Operators	---	---	---
Deregulated All Cargo Carriers	6	---	---
Total--Passenger Operations	17	5	350
Certificated Route Air Carrier			
Scheduled Passenger Service	17	5	350
Domestic	13	4	279
International/Territorial	4	1	71
Supplemental Air Carrier Passenger			
Service (Civil and Military)	---	---	---
Commercial Passenger Service	---	---	---

NOTE: Beginning in 1975, accidents involving commercial operators of large aircraft are included. Nonrevenue miles of the supplemental air carriers are not reported.

Beginning in 1979, accidents involving deregulated all cargo carriers are included.

* Preliminary

SOURCE: National Transportation Safety Board.

TABLE 9-2

FATAL ACCIDENTS, FATALITIES -- U.S. AIR CARRIER ALL OPERATIONS: 1978 AND 1979*

Location	Operator	Date	Service	Aircraft	Total	Fatalities			Total Aboard	Reported Type of Accident
						Passenger	Crew	Others		
Total					353	321	29	3	414	
Certificated Route Air Carriers--total					350	321	26	3	411	
Clarksburg, WV	Alleghney Airlines	2/12/79	Psg	N262	2	1	1	---	25	Crashed during takeoff
Newark, NJ	New York Airlines	4/18/79	Psg	S61	3	3	---	---	18	Crashed after takeoff
Chicago, IL	American Airlines	5/25/79	Psg	DC10	273	258	13	2	271	Crashed shortly after takeoff
Hyannis, MA	Air New England	6/17/79	Psg	DHC6	1	---	1	---	10	Crashed during approach to landing
Mexico City, MX	Western Airlines	10/31/79	Psg	DC10	71	59	11	1	87	Crashed during landing
Supplemental Air Carriers										
Salt Lake City, UT	Transamerica Airlines	11/18/79	Cargo	L188	3	---	3	---	3	Airframe failure inflight.
Total					163	141	12	10	767	
Certificated Route Air Carrier--total					19	13	5	1	630	
Pueblo, CO	Fronteir Airlines	1/18/78	Trng	DHC6	3	---	3	---	3	Crashed during initial climb
Los Angles, CA	Continental Airlines	3/1/78	Psg	DC10	2	2	0	---	197	Crashed during rejected takeoff
Pensacola, FL	National Airlines	5/8/78	Psg	B727	3	3	0	---	58	Crashed during final approach
Atlanta, GA	Delta Airlines	6/11/78	Psg	L1011	1	---	0	1	183	Ground crewman fatally injured
Portland, OR	United Airlines	12/28/78	Psg	DC8	10	8	2	---	189	Crashed during landing
Commercial Operators--total					144	128	7	9	137	
San Diego, CA	Pacific Southwest Airlines	9/25/78	Psg	B727	142	128	7	7	135	Midar collision
				C172	2	---	---	2	2	

* Preliminary

TABLE 9.3
AIRCRAFT ACCIDENTS, ACCIDENT RATES, AND FATALITIES--
U.S. AIR CARRIER ALL OPERATIONS: 1970-1979*

Year	Number of Accidents		Aircraft Miles Flown (000)[A]	Accident Rate Per Million Aircraft Miles Flown		Fatalities		
	Total	Fatal		Total Accidents	Fatal Accidents	Total	Passengers	Crew and Others
1970	55	8	2,684,552	0.020	0.003	146	118	28
1971	48	8[B]	2,660,731	0.018	0.002	203	174	29
1972	50	8	2,619,043	0.019	0.003	190	160	30
1973	43	9	2,646,669	0.016	0.003	227	200	27
1974	47	9	2,464,295	0.019	0.003	467	421	46
1975[C]	45	3	2,477,764	0.018	0.001	124	113	11
1976	28	4	2,568,113	0.011	0.002	45	39	6
1977	26	5	2,684,072	0.010	0.002	656	382	274
1978	24	6	2,742,860	0.009	0.002	163	141	22
1979[D]	33	6	2,928,950	0.011	0.002	353	321	32

(A) Nonrevenue miles of the supplemental air carriers are not reported.

(B) Includes midair collision accidents nonfatal to air carrier occupants. Number of accidents excluded from fatal accident rates (1971-2).

(C) Beginning in 1975, figures include accidents involving commercial operators of large aircraft.

(D) Beginning in 1979, figures include accidents involving deregulated all cargo carriers.

* Preliminary

NOTE: Sabotage accident (9/8/74) is included in all computations except rates. In 1977, Fatalities (Other) includes 248 on aircraft of foreign registry.

SOURCE: National Transportation Safety Board.

TABLE 9.4
AIRCRAFT ACCIDENTS, ACCIDENT RATES, AND FATATLITIES--
U.S. CERTIFICATED ROUTE AIR CARRIERS: 1970-1979*

Year	Number of Accidents		Aircraft Miles Flown (000)	Accident Rate Per Million Aircraft Miles Flown		Fatalities		
	Total	Fatal		Total Accidents	Fatal Accidents	Total	Passengers	Crew and Others
1970	49	5	2,591,706	0.019	0.002	85	72	13
1971	47	8(a)	2,557,968	0.018	0.002	203	174	29
1972	48	8	2,526,021	0.019	0.003	190	160	30
1973	40	8	2,555,732	0.016	0.003	221	197	24
1974	45	8	2,384,933	0.018	0.003	463	420	43
1975	36	2	2,357,425	0.015	0.001	122	113	9
1976	25	3	2,448,413	0.010	0.001	42	39	3
1977	21	4	2,556,080	0.008	0.002	396	382	14
1978	22	5	2,625,000	0.008	0.002	19	13	6
1979	26	5	2,820,000	0.009	0.002	350	321	29

(a) Includes midair collision accidents nonfatal to air carrier occupants. Number of accidents excluded from fatal accident rates (1971-2).

NOTE: Sabotage accident (9/8/74) is included in all computations except rates. In 1977, Fatalities (Other) includes 248 on aircraft of foreign registry.

SOURCE: National Transportation Safety Board.

* Preliminary.

TABLE 9.5

AIRCRAFT ACCIDENTS, FATALITIES, AND FATALITY RATE--U.S. CERTIFICATED ROUTE AIR CARRIER SCHEDULED DOMESTIC AND INTERNATIONAL PASSENGER SERVICE: 1970-1979

Year	Aircraft Accidents		Fatalities			Passengers Carried	Passenger-Miles Flown (000)	Passenger Fatality Rate Per 100 Million Passenger-Miles
	Total	Fatal	Total	Passenger	Crew and Others			
1970	39	2	3	2	1	171,697,097	139,157,806	0.001
1971	41	6(a)	194	174	20	173,664,737	145,678,876	0.119
1972	43	7	186	160	26	188,938,932	159,722,015	0.100
1973	32	6	217	197	20	202,207,000	171,436,549	0.115
1974	42	7	460	420	40	207,449,006	173,349,894	0.197
1975	28	2	122	113	9	205,059,571	174,173,138	0.065
1976	21	2	38	36	2	223,313,131	190,915,721	0.019
1977	17	2	75	64	11	240,326,516	206,205,410	0.031
1978r	19	4	16	13	3	274,717,832	238,987,489	0.005
1979p	17	5	350	321	29	301,000,000	280,100,000	0.115

(a) Includes 2 midair collisions that were nonfatal to air carrier occupants.

r - Revised.

p - Preliminary.

NOTE: Passenger deaths occurring in sabotage accidents are included in the passenger fatality column, but are excluded in the computation of fatality rates (1974-1979 passengers).

SOURCE: National Transportation Safety Board.

TABLE 9.6

AIRCRAFT ACCIDENTS, FATALITIES AND FATALITY RATE--U.S. CERTIFICATED ROUTE AIR CARRIER SCHEDULED DOMESTIC PASSENGER SERVICE: 1970-1979

Year	Aircraft Accidents		Fatalities			Passengers Carried	Passenger-Miles Flown (000)	Passenger Fatality Rate Per 100 Million Passenger-Miles
	Total	Fatal	Total	Passenger	Crew and Others			
1970	32	1	1	---	1	155,097,644	109,183,837	---
1971	33	6(a)	194	174	20	156,097,403	113,240,603	0.154
1972	37	6	185	160	25	169,931,415	123,775,960	0.129
1973	27	4	138	128	10	183,271,000	133,733,181	0.096
1974	31	3	168	158	10	189,723,697	137,657,951	0.115
1975	21	2	122	113	9	188,743,983	140,299,953	0.081
1976	17	1	1	1	---	206,274,000	154,322,683	0.001
1977	15	2	75	64	11	222,283,516	166,424,934	0.038
1978r	18	4	16	13	3	253,959,242	191,967,140	0.007
1979p	13	4	279	262	17	276,800,000	223,800,000	0.117

r - Revised.

p - Preliminary.

(a) Includes 2 midair collisions that were nonfatal to air carrier occupants.

SOURCE: National Transportation Safety Board.

TABLE 9.7

ACCIDENTS, FATALITIES AND FATALITY RATE--U.S. CERTIFICATED ROUTE AIR CARRIER SCHEDULED INTERNATIONAL PASSENGER SERVICE: 1970-1979

Year	Accidents		Fatalities			Passengers Carried	Passenger-Miles Flown (000)	Passenger Fatality Rate Per 100 Million Passenger-Miles
	Total	Fatal	Total	Passenger	Crew and Others			
1970	7	1	2	2	---	16,599,453	29,973,969	0.007
1971	8	---	---	---	---	17,567,334	32,438,273	---
1972	6	1	1	---	1	19,007,517	35,946,055	---
1973	5	2	79	69	10	18,936,000	37,703,368	0.183
1974	12	4	292	262	30	17,725,309	35,691,093	0.513
1975	7	---	---	---	---	16,315,588	33,873,185	---
1976	4	1	37	35	2	17,039,131	36,593,038	0.096
1977	3	---	---	---	---	18,043,000	39,780,476	---
1978R	1	---	---	---	---	20,756,590	47,011,349	---
1979P	4	1	71	59	12	24,200,000	56,300,000	0.105

NOTE: Passenger deaths occurring in sabotage accidents are included in passenger fatality column but excluded in the computation of passenger fatality rates (1974-79 passengers).

SOURCE: National Transportation Safety Board.

P - Preliminary.

R - Revised.

TABLE 9.8
ACCIDENTS, ACCIDENT RATES, AND FATALITIES--U.S. SUPPLEMENTAL AIR CARRIERS
ALL OPERATIONS: 1970-1979

Year	Number of Accidents		Aircraft Miles Flown (000)(a)	Accident Rate Per Million Aircraft Miles Flown		Fatalities		
	Total	Fatal		Total Accidents	Fatal Accidents	Total	Passengers	Crew and Others
1970	6	3	92,846	0.065	0.032	61	46	15
1971	1	---	102,763	0.010	---	---	---	---
1972	2	---	93,022	0.022	---	---	---	---
1973	3	1	90,937	0.033	0.011	6	3	3
1974	2	1	79,363	0.025	0.013	4	1	3
1975	2	---	65,476	0.031	---	---	---	---
1976	1	---	62,640	0.016	---	---	---	---
1977	2	---	67,699	0.030	---	---	---	---
1978	2	---	79,500	0.025	---	---	---	---
1979p	1	1	74,700	0.013	0.013	3	---	3

(a) Nonrevenue miles not reported.

SOURCE: National Transportation Safety Board.

p - Preliminary.

TABLE 9.9

AIRCRAFT ACCIDENTS, FATALITIES AND FATALITY RATE--U.S. SUPPLEMENTAL AIR CARRIER CIVIL AND MILITARY OPERATIONS: 1970-1979

Year	Accidents		Fatalities			Passengers Carried	Passenger-Miles Flown (000)	Passenger Fatality Rate Per 100 Million Passenger-Miles
	Total	Fatal	Total	Passenger	Crew			
1970	2	1	47	46	1	2,950,224	10,288,728	0.447
1971	---	---	---	---	---	3,295,803	10,573,646	---
1972	---	---	---	---	---	3,473,599	10,049,683	---
1973	1	---	---	---	---	3,569,912	11,790,513	---
1974	1	---	---	---	---	3,194,463	10,862,449	---
1975	1	---	---	---	---	2,352,423	8,759,279	---
1976	1	---	---	---	---	2,191,661	8,199,053	---
1977	2	---	---	---	---	2,793,761	9,983,404	---
1978	1	---	---	---	---	3,100,000	10,400,000	---
1979p	---	---	---	---	---	2,900,000	9,900,000	---

SOURCE: National Transportation Safety Board.

p - Preliminary.

TABLE 9.10

AIRCRAFT ACCIDENTS, FATALITIES AND ACCIDENT RATES--
U.S. GENERAL AVIATION FLYING: 1970-1979

Year	Accidents		Fatalities	Aircraft Hours Flown (000)	Accident Rates 100,000 Aircraft Hours	
	Total	Fatal			Total	Fatal
1970	4,712	641(A)	1,310	26,030	18.1	2.46
1971	4,648	661	1,355	25,512	18.2	2.59
1972	4,256	695(A)	1,426(B)	26,974	15.8	2.57
1973	4,255	723(A)	1,412	29,974	14.2	2.41
1974	4,425	729(A)	1,438	31,413	14.1	2.31
1975	4,237	675(A)	1,345	32,024	13.2	2.10
1976	4,193	695	1,320	33,922	12.3	2.04
1977	4,286	702	1,436	35,792	12.0	1.96
1978R	4,494	793	1,770(B)	39,400	11.4	2.01
1979P	4,238	658	1,311	39,900	10.6	1.65

(A) Suicide/sabotage accidents are included in all computations except for rates (1970-1, 1972-3, 1973-2, 1974-2, 1975-2, 1976-4, 1977-1).

(B) Includes air carrier fatalities (1972-5, 1978-142) when in collision with general aviation aircraft.

SOURCE: National Transportation Safety Board.

P - Preliminary.
R - Revised.

TABLE 9.11
AIRCRAFT ACCIEDNTS, FATALITIES AND ACCIDENT RATES--
COMMUTER AIR CARRIERS: 1978 AND 1979

	All Revenue Operations		Passenger Operations	
	1978	1979p	1978	1979p
Accidents				
Total	54(51)	61(42)	32(31)	34(28)
Fatal	13(12)	16(12)	9	11(9)
Facilities				
Passengers	34	50	33	50(47)
Crew	13	18	9	10
Others	---	---	---	---
Total	47	68	42	60
Aircraft Hours Flown	1,228,480	1,261,500	1,014,806	1,100,000
Aircraft Miles Flown (000)	224,228	214,300	165,906	183,200
Revenue Passenger Miles Flown (000)	N/A	N/A	1,138,534	1,275,000
Departures	1,978,483	2,005,800	1,726,410	1,850,000
Accident Rate Per 100,000 Hours Flown*				
Total	3.96	3.33	3.05	2.55
Fatal	0.93	0.95	0.89	0.82
Accident Rate Per Million Miles Flown*				
Total	0.23	0.20	0.19	0.15
Fatal	0.05	0.06	0.05	0.05
Accident Rate Per 100,000 Departures*				
Total	2.58	2.09	1.80	1.51
Fatal	0.61	0.60	0.52	0.49
Passenger Facility Rate Per 100 Million Passenger Miles*	N/A	N/A	2.90	3.69

p - Preliminary

* Rates exclude accidents involving operators not reporting traffic data to CAB. When pertinent, accidents/fatalities used in rate computation are shown in parenthesis.

GLOSSARY

Active Aircraft--All legally registered civil aircraft which flew one or more hours.

ADF--Automatic Direction Finder.

Aerial Application--See Primary Use.

Air Carriers--The commercial system of air transportation consisting of the certificated route air carriers, air taxis (including commuters), supplemental air carriers, commercial operators of large aircraft, and air travel clubs.

- o Certificated route air carrier--An air carrier holding a Certificate of Public Convenience and Necessity issued by the Civil Aeronautics Board authorizing the performance of scheduled service over specified routes, and a limited amount of nonscheduled service.
- o Air taxi--The classification of air carriers which transports persons, property, and mail using small aircraft (under 30 seats or a maximum payload capacity of less than 71,500 pounds). An air taxi does not hold a Certificate of Public Convenience and Necessity nor economic authority as issued by the Civil Aeronautics Board.
- o Commuter air carrier--an air taxi which 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 points between which such flights are performed.
- o Supplemental air carrier--An air carrier which holds a Certificate of Public Convenience and Necessity issued by the Civil Aeronautics Board, authorizing performance of passenger and cargo charter services supplementing the scheduled service of the certificated route air carriers. Both international and domestic charter operations are for a temporary period. The authority of supplemental air carriers to engage in military charters is of an indefinite period. In addition, they can perform on an emergency basis, as may be authorized by the Civil Aeronautics Board, scheduled operations including the transportation of individually ticketed passengers and individually waybilled cargo.
- o Commercial operator--a person who for compensation or hire engages in the carriage of aircraft in air commerce of persons or property other than as an air carrier or foreign air carrier.
- o Commercial operator of large aircraft--commercial operator operating aircraft of more than 12,500 pounds maximum certificated takeoff weight.
- o Air Travel Club--a person who engages in the carriage by airplanes of persons who are required to qualify for that carriage by payment of an assessment, dues, membership fee, or other similar types of remittance.

Aircraft Contacted--Aircraft with which the flight service stations (FSS) have established radio communications contact. One count is made for each en route, landing, or departing aircraft contacted by an FSS regardless of the number of contacts made with an individual aircraft during the same flight. A flight contacting five FSS's would be counted as five aircraft contacted.

Aircraft Handled--See IFR Aircraft Handled.

Aircraft Operation--The airborne movement of aircraft in controlled or noncontrolled airport terminal areas and about given en route fixes or at other points where counts can be made. There are two types of operations--local and itinerant.

- o Local operations are performed by aircraft which:
  - (a) Operate in the local traffic pattern or within sight of the airport.
  - (b) Are known to be departing for, or arriving from, flight in local practice areas within a 20-mile radius of the airport.
  - (c) Execute simulated instrument approaches or low passes at the airport.
- o Itinerant operations are all aircraft operations other than local operations.

Aircraft Type--A term used in this publication in grouping aircraft by basic configuration--fixed-wing, rotorcraft, glider, dirigible, and balloon.

Air Defense Identification Zone--The area of airspace over land or water within which the ready identification, the location, and the control of aircraft are required in the interest of national security.

Airline Transport Pilot--See Pilot.

Airman--A pilot, mechanic, or other licensed aviation technician.

Airman Certificate--A document issued by the Administrator of the Federal Aviation Administration certifying that the holder complies with the regulations governing the capacity in which the certificate authorizes the holder to act as an airman in connection with aircraft.

Airport--An area of land or water that is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.

Airport Advisory Service (AAS)--A service provided by flight service stations at airports not served by a control tower. This service consists of providing information to landing and departing aircraft concerning wind direction and velocity, favored runway, altimeter setting, pertinent known traffic, pertinent known field conditions, airport taxi routes and traffic patterns, and authorized instrument approach procedures.

Airport Surveillance Radar (ASR)--Radar providing position of aircraft by azimuth and range data. ASR does not provide elevation data. It is designed for range coverage up to 60 nautical miles and is used by terminal area air traffic control.

Airport Traffic--Aircraft operating in the air or on an airport surface exclusive of loading ramps and parking areas.

Airport Traffic Control Service--Air traffic control service provided by an airport traffic control tower for aircraft operating on the movement area and in the vicinity of an airport.

Airport Traffic Control Tower (ATCT)--A central operations facility in the terminal air traffic control system, which consists of a tower cab structure, including an associated IFR room if radar equipped, and uses air/ground communications, radar, visual signaling, and other devices to provide safe and expeditious movement of terminal air traffic.

Air Route Traffic Control Center (ARTCC)--A facility established to provide air traffic control service to aircraft operating on IFR flight plans within controlled airspace, and principally during the en route phase of flight.

Air Taxi--See Air Carrier and Primary Use.

Air Traffic Control (ATC)--A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.

Air Traffic Control Facility--A facility which provides air traffic control services located in the U.S., its possessions and territories, and in foreign countries especially established by international agreement.

Air Traffic Hub--Air traffic hubs are not airports; they are the cities and Standard Metropolitan Statistical Areas requiring aviation services. Communities fall into four classes as determined by each community's percentage of the total enplaned passengers in scheduled service of the fixed-wing operations of the domestic certificated route air carriers in the 50 States, the District of Columbia, and other U.S. areas designated by the Federal Aviation Administration.

- o Large air traffic hub--a community enplaning 1.00 percent or more of the total enplaned passengers.
- o Medium air traffic hub--a community enplaning from 0.25 to 0.99 percent of the total enplaned passengers.
- o Small air traffic hub--a community enplaning from 0.05 to 0.24 percent of the total enplaned passengers.
- o Nonhub--a community enplaning less than 0.05 percent of the total enplaned passengers.

Air Travel Club--See Air Carrier.

All-Cargo Carrier (418)--One of a class of air carriers holding an All Cargo Air Service Certificate issued under section 418 of the Federal Aviation Act and certificated in accordance with FAR 121 to provide domestic air transportation of cargo.

All-Cargo Carrier--One of a class of air carriers holding temporary Certificates of Public Convenience and Necessity issued by the Civil Aeronautics Board, which authorize the performance of scheduled air freight, express, and mail transportation over specified routes, as well as nonscheduled operations which may include passengers.

Altitude Encoding (Automatic Altitude Reporting)--An aircraft altitude transmitted via the Mode C transponder feature that is visually displayed in 100 feet increments on the ground radar scope having readout capability.

American Flag Carrier--See U.S. Flag Carrier.

Approach Control Facility--A terminal area traffic control facility providing approach control service.

Approach Control Service--Air traffic control service provided by an approach control facility for arriving and departing aircraft and, on occasion, tower en route control service.

Area Navigation (RNAV)--A method of navigation that permits aircraft operations on any desired course within the coverage of station-referenced navigation signals or within the limits of self-contained system capability.

ARSR--Air Route Surveillance Radar.

ASR--See Airport Surveillance Radar.

ARTCC--Air Route Traffic Control Center.

Automatic Direction Finder (ADF)--An aircraft radio navigation system which senses and indicates the direction to a nondirectional radio beacon ground transmitter. Direction is indicated to the pilot as a magnetic bearing or as a relative bearing to the longitudinal axis of the aircraft.

Automatic Pilot--An aircraft can be controlled about the roll, pitch, and yaw axis by use of an automatic pilot. Information from VOR, ILS, MLS, and other navigation aids can be coupled to the automatic pilot for en route and approach flights.

Business Transportation--See Primary Use.

CAB--Civil Aeronautics Board.

Certificated Route Air Carrier--See Air Carrier.

Combined Station Tower--A combined facility (see Airport Traffic Control Tower and Flight Service Station).

Commercial Operator--See Air Carrier.

Commercial Pilot--See Pilot.

Commuter Air Carrier--See Air Carrier.

Controlled Airspace--Airspace control area designated as a continental control area, control zone, terminal control area, or transition area, within which some or all aircraft may be subject to air traffic control.

CS/T--Combined Station/Tower.

Defense Visual Flight Rules (DVFR)--A flight within an Air Defense Identification Zone conducted under the visual flight rules in Federal Aviation Regulation, Part 99.

Distance Measuring Equipment (DME)--Airborne and ground equipment used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid.

DME--Distance Measuring Equipment.

Domestic Operations--In general, operations within and between the 50 States, and the District of Columbia.

DVFR--Defense Visual Flight Rules.

Executive Transportation--See Primary Use.

Express (Air)--Property transported by air under published air express tariffs filed with the Civil Aeronautics Board.

FAR--Federal Aviation Regulation.

Flight Advisory Service--Advice and information provided by a facility to assist pilots in the safe conduct of flight and aircraft movement.

Flight Plan--Specified oral or written information about the intended flight of an aircraft that is filed with air traffic control.

Flight Service Station (FSS)--Air Traffic Service faccilities within the National Airspace System (NAS) which provide preflight pilot briefings and en route communications with VFR flights, assist lost IFR/VFR aircraft, assist aircraft having emergencies, relay Air Traffic Control clearances, originate, classify, and disseminate Notices to Airmen, broadcast aviation weather and NAS information, receive the close flight plans, monitor radio NAVIDS, notify search and rescue units of missing VFR aircraft, and operate the national weather teletypewriter system. In addition, at selected locations, FSSs take weather observations, issue airport advisories, administer airmen written examinations, and advise Customs and Immigration of transborder flight.

Foreign Flag Air Carrier--An air carrier other than a U.S. flag air carrier engaged in international air transportation (see also U.S. Flag Carrier).

Foreign Mail--Mail transported outside the United States by U.S. flag carriers for a foreign government.

FSS--Flight Service Station.

General Aviation--That portion of civil aviation which encompasses all facets of aviation except air carriers.

Glide Slope--See Instrument Landing System.

Heliport--An area of land, water, or any structure used or intended to be used for the landing and takeoff of helicopters.

Hub--See Air Traffic Hub.

ICAO--International Civil Aviation Organization (Montreal, Canada).

IFR--Instrument Flight Rules.

IFR Aircraft Handled--The number of IFR departures multiplied by two plus the number of IFR overs. This definition assumes that the number of departures (acceptances, extensions, and originations of IFR flight plans) is equal to the number of landings (IFR flight plans closed).

IFR Departure--An IFR departure includes IFR flights originating in a center's area, accepted by the center under SOLE EN ROUTE clearance procedures, and extended by the center.

IFR Over--An IFR flight that originates outside the ARTCC area and passes through the area without landing.

IFSS--International Flight Service Station.

ILS--Instrument Landing System.

Inactive Aircraft--All legally registered civil aircraft which flew zero hours.

Industrial/Special--See Primary Use.

Instructional Flying--See Primary Use.

Instrument Approach--An approach to an airport, with intent to land, by an aircraft flying in accordance with an IFR flight plan, when the visibility is less than 3 miles and/or when the ceiling is at or below the minimum initial altitude.

Instrument Flight Rules (IFR)--Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

Instrument Landing System (ILS)--A precision instrument approach system which normally consists of the following electronic and visual aids:

- o Localizer--Provides course guidance to the runway.
- o Glide Slope--Provides vertical guidance during approach.
- o Marker Beacon--Provides aural and/or visual identification of a specific position along an instrument approach landing.

Instrument Operation--An aircraft operation in accordance with an IFR flight plan or an operation where IFR separation between aircraft is provided by a terminal control facility or air route traffic control center.

International Flight Service Station (IFSS)--A central operations facility in the flight advisory system, staffed and equipped to control aeronautical point-to-point telecommunications, and air/ground telecommunications with pilots operating over international territory or waters, which provides flight plan following, weather information, search and rescue action, and other flight assistance operations.

International Operations--In general, operations outside the territory of the U.S., including operations between the U.S. and foreign countries, and the U.S. and its territories or possessions. Includes both the combination passenger/cargo carrier and the all-cargo carriers engaged in international and territorial operations.

Itinerant Operation--See Aircraft Operation.

Jet Routes--A route designed to serve aircraft operations from 18,000 feet to 45,000 feet.

Large Air Traffic Hub--See Air Traffic Hub.

Localizer--See Instrument Landing System.

Local Operation--See Aircraft Operation.

Long Range Navigation--A method of navigation that permits navigation over long distances. This is in contrast to the relatively short range navigation provided by the VOR system.

Marker--See Instrument Landing System.

Medium Air Traffic Hub--See Air Traffic Hub.

Microwave Landing System (MLS)--An instrument landing system operating in the microwave spectrum which provides lateral and vertical guidance to aircraft having compatible avionics equipment.

MLS--Microwave Landing System.

Mode C--See Altitude Encoding.

NAVAIDS--Navigational Aids.

Nondirectional Radio Beacon--A radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine headings to or from the radio beacon and "home" on a track to or from the station.

Nonhub--See Air Traffic Hub.

NOTAMS--Notice to Airmen.

Notice to Airmen--A notice containing information concerning the establishment, condition or change in any component of, or hazard in the National Airspace System, the timely knowledge of which is essential to personnel concerned with flight operations.

Over--See IFR Over.

Passenger/Cargo Air Carrier--One of a class of air carriers holding Certificates of Public Convenience and Necessity issued by the Civil Aeronautics Board, authorizing the performance of scheduled air transportation of passengers and property over specified routes.

Personal Flying--See Primary Use.

Pilot--

- o Student Pilot--A student pilot may not operate an aircraft that is carrying a passenger or that is carrying property for compensation or hire.
- o Private Pilot--A private pilot may not act as a pilot-in-command of an aircraft that is carrying passengers for compensation or hire nor may a private pilot act as pilot-in-command for compensation or hire.
- o Commercial Pilot--A commercial pilot may act as pilot-in-command of an aircraft carrying passengers for compensation or hire and act as pilot-in-command of an aircraft for compensation or hire.
- o Airline Transport Pilot--An airline transport pilot may act as a pilot-in-command of an aircraft engaged in air carrier service.

Pilot Briefing--Information furnished a pilot to assist in flight planning. Principal items are weather conditions, notices to airmen, routes, and preparation and handling of the flight plan.

Positive Control--Control of all air traffic, within designated airspace, by air traffic control.

Primary Use--The use category in which an aircraft flew the most hours. The nine use categories are defined below:

- o Aerial Application--Any use of an aircraft for work purposes which concerns the production of foods, fibers, and health control in which the aircraft is used in lieu of farm implements or ground vehicles for the particular task accomplished. This includes the distribution of chemicals or seeds in agriculture, reforestation, or insect control; it excludes firefighting operations.
- o Air Taxi--Use of an aircraft operating under Federal Aviation Regulations, Part 135. See also Air Carrier-Air Taxi.
- o Business Transportation--Use of an aircraft not for compensation or hire by individuals for the purposes of transportation required by business in which they are engaged.
- o Executive Transportation--Any use of an aircraft by a corporation, company, or other organization for the purposes of transporting its employees and/or property not for compensation or hire, and employing professional pilots for the operation of the aircraft.
- o Industrial/Specialist--Any use of an aircraft for specialized work allied with industrial activity; excluding transportation and aerial application. (Examples: pipeline patrol, survey, advertising, photography, helicopter hoist, etc.).

- o Instructional Flying--Any use of an aircraft for the purpose of formal instruction with the flying instructor abroad, or with the maneuvers on the particular flight(s) specified by the flight instructor.
- o Personal Flying--Any use of an aircraft for personal purposes not associated with a business or profession, and not for hire. This includes maintenance of a pilot proficiency.
- o Rental Aircraft--Aircraft owned for the purpose of renting out.
- o Other--Any other use of an aircraft not included above.

Private Pilot--See Pilot.

Private-Use Airport--An airport which is not open for the use of the general public.

Privately-Owned Airport--An airport which is owned by a private individual or corporation.

Publicly-Owned Airport--An airport which is publicly-owned and under control of a public agency.

Public-Use Airport--An airport open to the public without prior permission, and without restrictions within the physical capacities of available facilities. May or may not be publicly owned.

Radar Altimeter--Aircraft instrument that makes use of the reflection of radio waves from the ground to determine the height of the aircraft above the surface.

Registered Aircraft--Aircraft registered with the Federal Aviation Administration.

Rental Aircraft--See Primary Use.

RNAV--See Area Navigation.

Small Air Traffic Hub--See Air Traffic Hub.

Stolport--An airport specifically designed for STOL (Short Take-off and Landing) aircraft, separate from conventional airport facilities.

Student Pilot--See Pilot.

Supplemental Air Carrier--See Air Carrier.

Terminal Area--A general term used to describe airspace in which approach control service or airport traffic control service is provided.

Tower--See Airport Traffic Control Tower.

Transponder--The airborne radar beacon receiver/transmitter portion of the Air Traffic Control Beacon System that automatically receives radio signals from interrogators on the ground and selectively replies with specific reply pulse-on-pulse group, only to those interrogations being received on the mode to which it is set to respond. Each aircraft transponder is capable of replying to 4,096 codes as selected by the pilot. Provides the air traffic controller positive location and, in some cases, altitude information.

U.S. Flag Carrier or American Flag Carrier--One of a class of air carriers holding a Certificate of Public Convenience and Necessity issued by the Civil Aeronautics Board, approved by the President, authorizing scheduled operations over specified routes between the United States (and/or its territories) and one or more foreign countries. (See also Foreign Flag Air Carrier.)

VFR--Visual Flight Rules.

VFR Flight--Flight conducted in accordance with Visual Flight Rules.

VHF--Very high frequency.

VHF Communications--Provides radio voice communications between aircraft and ground stations, also between aircraft. Very High Frequency (VHF) is limited in range (line of sight) and usually used for air traffic communications.

VOR--Very high frequency omnidirectional radio range. Used as the basis for navigation in the National Airspace System.

VORTAC--A navigation aid providing azimuth and distance measuring equipment at one site.

Weather Radar--Provides the flight crew with visual display of weather that could contain turbulence. The system's primary function is to assist in turbulence avoidance, although most airborne radar systems are also capable of terrain mapping.

Below is a list of the publications compiled by the Information and Statistics Division. Questions may be directed to us by telephoning (202) 426-3791 or writing Information and Statistics Division, AMS-200, Federal Aviation Administration, Washington, D.C. 20591.

FAA Statistical Handbook of Aviation is a convenient source for historical data. It presents statistical information pertaining to the Federal Aviation Administration, the National Airspace System, Airports, Airport Activity, U.S. Civil Air Carrier Fleet, U.S. Civil Air Carrier Operating Data, Airmen, General Aviation Aircraft, Aircraft Accidents.

Reporting period:	Calendar Year
Latest edition:	1978 data
Order from:	National Technical Information Service or U.S. Government Printing Office
Date 1979 information will be available:	Various
Date next publication is scheduled:	December 1981 (1979 data)

U.S. Civil Airmen Statistics is an annual study of detailed airmen statistics. It contains calendar year statistics on pilots and nonpilots and the number of certificates issued.

Reporting period:	Calendar Year
Latest edition:	1979 data
Order from:	Information & Statistics Division
Date 1980 information will be available:	March 1981
Date next publication is scheduled:	June 1981 (1980 data)

Census of U.S. Civil Aircraft is an annual publication that includes statistical data on the registered civil fleet, air carrier aircraft, and general aviation aircraft--both registered and active, detailed reports for general aviation aircraft by owner's state and county, and registered aircraft by make and model.

Reporting period:	Calendar Year
Latest edition:	1978 data
Order from:	National Technical Information Service or U.S. Government Printing Office
Date 1980 information will be available:	May 1981
Date next publication is scheduled:	September 1981 (1980 data)

FAA Air Traffic Activity furnishes terminal and en route air traffic activity information (i.e., operations, flight plans filed) of the National Airspace System. The data is from the FAA-operated Airport Traffic Control Towers, Air Route Traffic Control Centers, Flight Service Stations, and Approach Control Facilities.

Reporting Period:	Fiscal Year
Latest edition:	1979 data
Order from:	National Technical Information Service or Government Printing Office
Date 1980 information will be available:	January 1981
Date next publication is scheduled:	April 1981 (1980 data)

General Aviation Pilot and Aircraft Activity Survey includes data on the type and source of aircraft flight plan and weather information services, trip length in time and distance, pilot age and certification, estimates of total 1978 general aviation operations, fuel consumption and aircraft miles flown. The survey was made by the Federal Aviation Administration with the assistance of the Civil Air Patrol.

Reporting period:	Survey conducted in 3-year intervals
Latest edition:	1978 data
Order from:	National Technical Information Service (Refer to: FAA-MS-79-7)
Date 1981 information will be available:	January 1982
Date next publication is available:	June 1982 (1981 data)

General Aviation Activity and Avionics Survey presents the results of the General Aviation Activity and Avionics Survey conducted to obtain information on the activity and avionics of the U.S. registered general aviation aircraft fleet. The survey reveals estimated flying time of the active general aviation aircraft, and other statistics by manufacturer/model group, aircraft type, state and region of based aircraft, and primary use. Estimates are included on fuel consumption, lifetime airframe hours, avionics, and engine hours.

Reporting period:	Calendar year
Latest edition:	1978 data
Order from:	National Technical Information Service or Government Printing Office (Refer to: FAA-MS-80-5)
Date 1979 information will be available:	October 1980
Date next publication is available:	February 1981 (1979 data)

General Aviation Avionics Statistics report presents avionics statistics for the 1976 general aviation aircraft fleet. The statistics are presented in a capability group framework which enables one to relate airborne avionics equipment to the capability for a general aviation aircraft to function in the National Airspace System.

Reporting period:	Calendar Year
Latest edition:	1977 data
Order from:	National Technical Information Service
Date 1980 information will be available:	October 1980
Date next publication is available:	June 1981

FAA Directory published three times each year, it contains six sections of data: Washington/Region/Center headquarters; field facilities; regional area maps and organizational charts; alphabetical listing; special interest groups; and, a glossary.

Reporting period:	Every four months
Latest edition:	September 1980
Ordering from:	Government Printing Office
Date next publication is available:	March 1981

Airport Activity Statistics of Certificated Route Air Carriers joint publication of the Federal Aviation Administration and the Civil Aeronautics Board furnishes airport activity of the certificated route air carriers. Included in the data are passenger enplanements, tons of enplaned freight, express and mail. Both scheduled/nonscheduled service and domestic/international operations shown by airport and carrier are included. This report includes departures by airport, carrier and type of operation, and type of aircraft.

Reporting period:	Calendar Year
Latest edition:	1979 Data
Order from:	National Technical Information Service or U.S. Government Printing Office
Date 1980 information will be available:	June 1981
Date next publication is available:	September 1981 (1980 data)

Ordering Information

Addresses are listed below for ordering or information purposes.

- National Technical Information Service
  5285 Port Royal Road
  Springfield, VA 22161

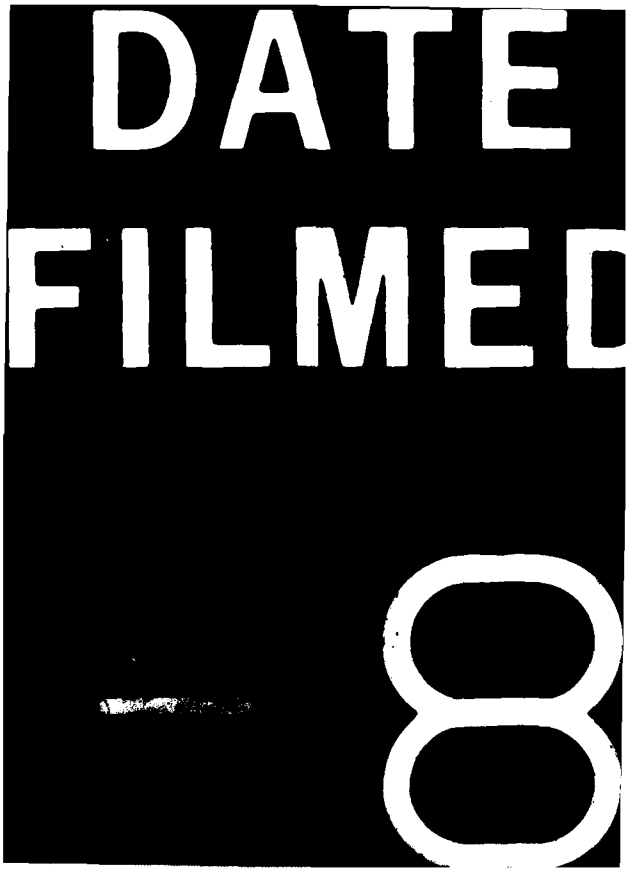
  Telephone: (703) 487-4650 (Use this number if you have a stock number)
  (703) 487-4780 (This is the Identification Section. Use this number if you do not have a stock number.)

  Format: Microfiche - $3.50
  Hard copy made from microfiche. Cost depends on number of pages in report.

- U.S. Government Printing Office
  Public Documents Department
  Washington, DC 20402

  Telephone: (202) 783-3238 (orders and inquiries)

  Format: Hard copy--original published form. Cost varies with documents.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