

SECTION 3 – FORECAST OF AVIATION ACTIVITY

This chapter reviews historical aviation activity at Detroit Metropolitan Wayne County Airport (the Airport and DTW) and presents forecasts of aviation activity (the Forecast) for fiscal years¹ 2010, 2015 and 2025. Historical data are presented on a calendar-year basis, unless otherwise indicated.

3.1 Historical Aviation Activity

Detroit Metropolitan Wayne County Airport is located in the City of Romulus, County of Wayne, Michigan, about 20 miles southwest of the central business district of the City of Detroit. The Airport provides scheduled commercial service primarily to the 10-county Detroit-Ann Arbor-Flint Consolidated Metropolitan Statistical Area (Detroit CMSA) (**Exhibit 3.1-1**). Approximately 89 percent of the originating passengers at the Airport reside within the 10-county Detroit CMSA.²

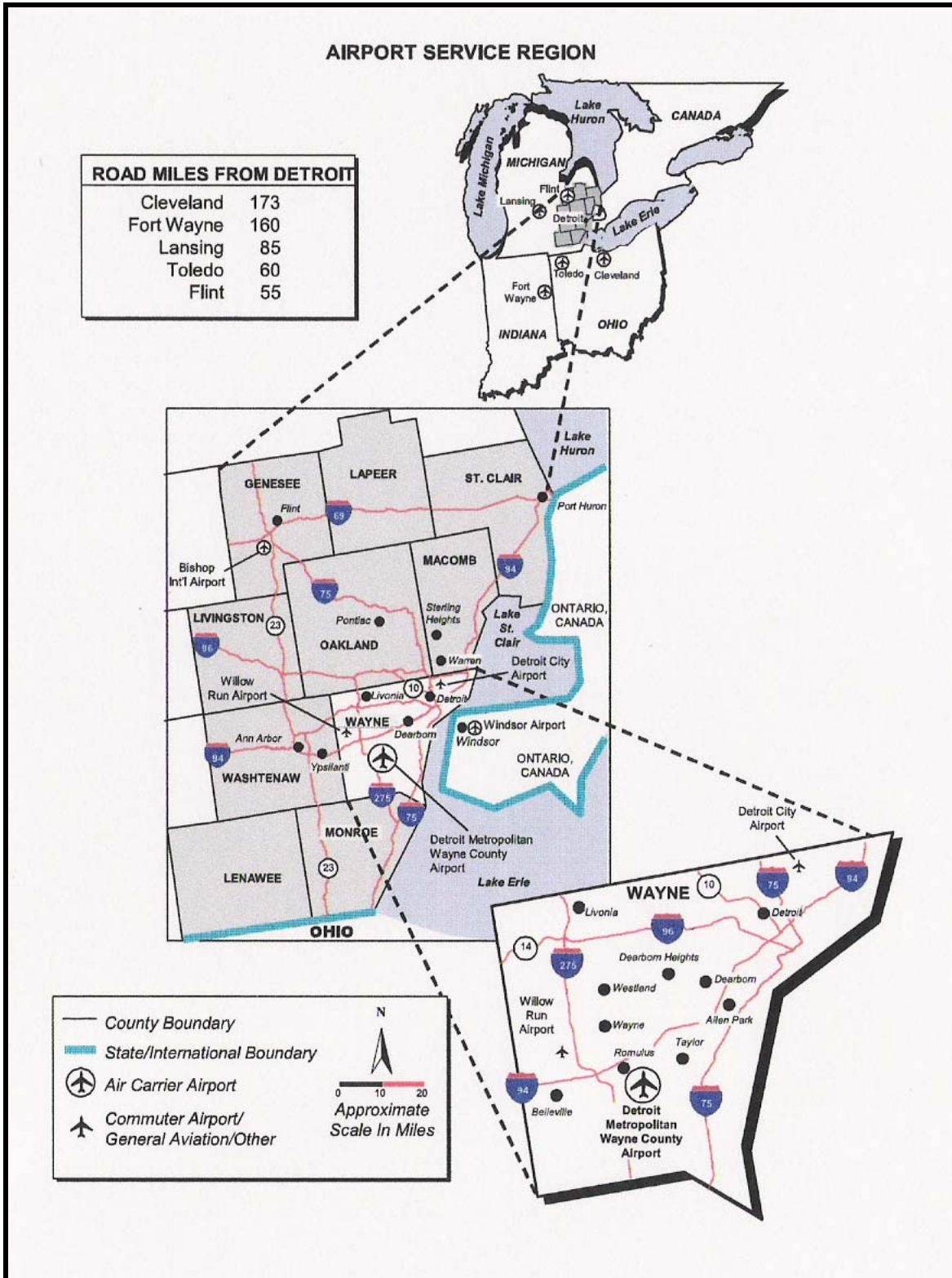
In 2005, the Airport served 36.4 million passengers, making it the 11th largest airport in North America and the 20th largest in the world, according to the Airports Council International (ACI). In the same year, the Airport processed nearly 522,000 aircraft operations, making it the 11th busiest in North America and the 12th busiest in the world. By Federal Aviation Administration (FAA) classification, the Airport is a “large hub” as it accounts for at least one percent of total U.S. enplanements.

There are five other airports within 60 miles of DTW, but none provide the same level of service and scale of operations as DTW. Willow Run Airport, Coleman A. Young International Airport (formerly Detroit City Airport), and Oakland County International Airport have no scheduled commercial passenger service. Managed by the Wayne County Airport Authority (WCAA) and only seven miles from DTW, Willow Run Airport serves as a reliever for cargo, corporate and general aviation operations. Coleman A. Young International Airport has had no commercial passenger service since 2000, and now serves mainly corporate and general aviation clients. Oakland County International Airport is also a designated general aviation reliever. Within 60 miles of Detroit, Bishop International Airport and Toledo Express Airport, which is outside the boundaries of the Detroit CMSA, provide relatively limited commercial passenger service. According to the latest FAA Terminal Area Forecasts (TAF), Bishop International Airport enplaned more than 580,000 passengers and Toledo Express Airport enplaned nearly 313,000 passengers in FY 2004.

¹ The fiscal year ends on September 30.

² “Attachment B – Report of the Airport Consultant,” *Wayne County Airport Authority Airport Revenue Bonds (Detroit Metropolitan Wayne County Airport)*, Series 2005, April 1, 2005, page B-25.

Exhibit 3.1-1 The Detroit-Ann Arbor-Flint CMSA



Reprinted with permission from "Attachment B – Report of the Airport Consultant," Wayne County Airport Authority Airport Revenue Bonds (Detroit Metropolitan Wayne County Airport), Series 2005, April 1, 2005.

3.1.1 Airlines Serving the Airport

Table 3.1-1 lists the passenger airlines that served DTW in 2005. A total of 39 airlines provided commercial passenger service at the Airport: 15 provided scheduled air carrier³ service, 17 provided scheduled commuter service, and seven provided charter service (including TransMeridian, which ceased operations on September 30, 2005). Of the 39 passenger airlines, 32 are U.S. carriers and seven are foreign flag carriers.

Signatory airlines accounted for 97.3 percent of total enplanements in 2005. Northwest and its Northwest AirlinK affiliates, Mesaba and Pinnacle, operate a large connecting hub at the Airport and accounted for 78.5 percent of total enplanements in 2005. The remaining signatory carriers accounted for 18.8 percent of total enplanements in the same year.

Low-cost carriers (LCCs) providing scheduled passenger service at the Airport are Air Tran (which began operations in November 2005), America West and US Airways (which merged in September 2005), Frontier (which began operations in May 2005), Independence Air (which ceased operations in January 2006), Southwest and Spirit. LCCs accounted for a combined enplanement share 10.2 percent in 2005.

The Airport is also served by a number of all-cargo carriers, including ABX Air, Astar Air Cargo, Federal Express and United Parcel Service.

3.1.2 Airport History

In 1927 Wayne County voters approved a \$2 million bond issue to finance land acquisition and construction for the Airport. Development began in 1928, and the Airport served primarily general aviation (GA) operations until 1931, when it became the headquarters for the Michigan Air National Guard. American Airlines initiated scheduled passenger service at the Airport in 1939, but the U.S. Army Air Command took over the Airport from 1941 to 1947 for exclusive use as an air base during World War II. Detroit City Airport served as the principal commercial airport until 1946 when, due to lack of space at Detroit City Airport, commercial operations were transferred to Willow Run Airport as an interim solution.

With the return of Airport control to Wayne County in 1947, a program to expand the Airport was initiated. In 1952, the Civil Aeronautics Administration decided that the Airport should be improved to meet the future air transportation needs of the Detroit region. A multi-million dollar expansion program, which included a new parallel runway and the L.C. Smith Terminal, was completed in 1958. Airlines increasingly transferred commercial service from Willow Run to the Airport. With the opening of the Davey Terminal in 1966, the Airport became the principal commercial passenger airport serving the Detroit CMSA.

³ In the Terminal Area Forecast (TAF), FAA classifies airlines that operate aircraft with 60 seats or more as “air carriers,” and airlines that operate aircraft with less than 60 seats as “commuters.”

Table 3.1-1 Passenger Airlines Serving DTW, CY 2005

Air Carrier ^a	Commuter ^b	Charter
Air France ^d	Air Canada ^d	Allegiant
Air Tran ^e (beginning in Nov. 2005)	Air Canada Jazz (United Express) ^{c d}	Champion
America West ^{c e f}	Air Wisconsin (United Express) ^c	Condor ^d
American ^c	Air Wisconsin (US Airways Express) ^c	Royal Jordanian ^d
British Airways ^{c d}	American Eagle ^c	Ryan International
Continental ^c	Atlantic Southeast (Delta Connection) ^c	TransMeridian (until Sept. 2005)
Delta ^c	Chautauqua (US Airways Express) ^c	USA 3000
Frontier ^e (beginning in May 2005)	Comair (Delta Connection) ^c	
Lufthansa ^{c d}	CommutAir (Continental Express) ^c	
Northwest ^c	ExpressJet (Continental Express) ^c	
Southwest ^{c e}	Independence Air ^e (until Jan. 2006)	
Spirit ^{c e}	Mesa (United Express) ^c	
United ^c	Mesa (US Airways Express) ^c	
US Airways ^{c e f}	Mesaba (Northwest Airlin) ^c	
Skywest (United Express) ^c	Piedmont (US Airways Express) ^c	
	Pinnacle (Northwest Airlin) ^c	
	PSA (US Airways Express) ^c	
	Shuttle A (Delta Express) ^c	
	Trans States (US Airways Express) ^c	

Notes:

^a In the Terminal Area Forecast, the FAA classifies airlines that operate aircraft with 60 seats or more as air carriers. Therefore, this airline classification can include regional airlines that operate regional jet aircraft with more than 60 seats. Skywest is classified under air carrier because it operated a regional jet aircraft with more than 60 seats in 2005.

^b In the Terminal Area Forecast, the FAA classifies airlines that operate aircraft with less than 60 seats as commuters. Therefore this classification includes airlines that operate regional jet and turboprop aircraft with less than 60 seats.

^c Signatory airline.

^d Foreign flag carrier.

^e Low-cost carrier.

^f America West merged with US Airways in September 2005.

Source: Wayne County Airport Authority records.

Table 3.1-2 lists the important milestones in the Airport's history prior to 1966, and **Table 3.1-3** shows the Airport's enplanement history and milestones from 1966 through 2005.

Table 3.1-2 History of the Airport, Pre-1966

Year	Event
1927	Wayne County voters approved a \$2 million bond issue to finance land acquisition and construction of the Airport.
1928	The bonds were issued, and development of Wayne County Airport began. The Airport served primarily general aviation.
1929	The Airport opened to the public in September.
1930	Thompson Aeronautical Corporation, the predecessor company of American Airlines, inaugurated service from Wayne County Airport.
1931	The Airport became the base for the Michigan Air National Guard.
1939	An administration building was constructed.
1941	The U.S. Army took control of the Airport for exclusive use as an air base during WWII. The Army constructed new hangars, runways and other facilities. Detroit City Airport served as the principal commercial airport through 1945.
1944	The Wayne County Board of Supervisors authorized the expansion of the Airport.
1946	Detroit City Airport was running out of space to accommodate growing traffic, and commercial operations were transferred to Willow Run Airport as an interim solution. Studies were initiated to select a new airport site.
1947	Control of the Airport was returned to Wayne County, and the Airport was renamed Detroit-Wayne Major Airport.
1948	The Airport land envelope increased from one to four square miles.
1949	Runways 3C and 9-27 were built.
1950	Runway 3L-21R, an air traffic control tower, and an administration building were constructed. Pan American and British Overseas Airways initiated scheduled service from the Airport.
1952	A new cargo building was built and leased to Flying Tiger Line, Meteor Air Transport, and Slick Airways.
1956	A \$1 million federal aid to the Airport was announced. American signed a 30-year contract with the Wayne County Road Commission to move operations from Willow Run to Detroit-Wayne County Major Airport. The Civil Aeronautics Administration (CAA) announced that the Airport was one of the first cities to receive long-range radar in a \$246 million program to prepare the nation for civil jet transport.
1958	CAA certified the Airport as an international jet craft airport. The airport was renamed Detroit Metropolitan Wayne County Airport. A multi-million dollar expansion program, including the construction of a new parallel runway, 3L-21R, and the L.C. Smith Terminal, was completed. American, Allegheny, Northwest Orient, Pan Am and British Overseas moved from Willow Run to the Airport.
1959	Delta and Northwest moved to the Airport.
1960-1965	Various facilities were constructed at the Airport.

Sources:

Detroit Metropolitan Wayne County Airport Master Plan Study, Draft March 10, 1993.

Detroit Metropolitan Wayne County Airport Chronological History at www.metroairport.com.

Table 3.1-3 History of the Airport, 1966-2005

Year	Total Enplanements		Event
	Level (Millions)	Growth Rate	
1966	2.10	51.2%	Terminal 2 (North Terminal), renamed J.M. Davey Terminal in 1975, was constructed. Six other passenger airlines moved operations to the Airport, bringing the number of scheduled passenger airlines at the Airport to thirteen.
1967	2.86	36.5%	
1968	3.39	18.5%	
1969	3.68	8.6%	
1970	3.50	-5.1%	The U.S. economy was in recession from December 1969 to November 1970. ^a
1971	3.59	2.7%	The Airport Master Plan was completed.
1972	3.90	8.5%	
1973	4.06	4.4%	
1974	3.90	-4.0%	The Michael Berry International Terminal was completed. The U.S. economy was in recession from November 1973 to March 1975. ^a
1975	3.71	-4.8%	
1976	4.05	9.0%	The third parallel runway, 3R-21L, was completed.
1977	4.39	8.5%	Deregulation was enacted, allowing airlines to set fares and routes.
1978	4.95	12.8%	
1979	5.56	12.3%	
1980	4.92	-11.5%	U.S. economic recession, January 1980 to July 1980. ^a
1981	4.54	-7.7%	U.S. economic recession, January 1981 to November 1982. ^a
1982	4.51	-0.8%	U.S. economic recession, January 1981 to November 1982. ^a
1983	5.20	15.4%	Republic Airlines established a system hub at the Airport. Wayne County issued \$90 million in Special Facility Revenue Bonds to finance facility improvement and expansion to accommodate Republic's expansion at the Airport.
1984	5.84	12.3%	
1985	7.83	34.2%	
1986	8.92	13.9%	Republic merged with Northwest Orient Express. Wayne County approved a \$166 million bond issue to finance the Airport Capital Improvement Program.
1987	9.90	11.0%	The Airport Master Plan Update and Noise Compatibility Plan were completed.
1988	9.80	-1.0%	
1989	10.48	6.9%	
1990	10.55	0.6%	U.S. economic recession, July 1990 to March 1991; and Gulf War. ^a
1991	10.23	-3.0%	
1992	11.03	7.8%	Asian financial crisis, 1997-1998.
1993	11.73	6.3%	
1994	13.04	11.2%	
1995	14.13	8.3%	
1996	14.91	5.5%	
1997	15.37	3.1%	
1998	15.73	2.3%	
1999	16.95	7.8%	
2000	17.74	4.6%	
2001	16.29	-8.1%	
2002	16.22	-0.5%	U.S. economic recession, March 2001 to November 2001; and September 11 terrorist attacks. ^a
2003	16.36	0.9%	Sluggish economic recovery and post-September 11 travel slump. The McNamara Terminal opened in February 2002. The Wayne County Airport Authority was created to operate Detroit Metropolitan Wayne County Airport and Willow Run Airport.
2004	17.66	7.9%	The Iraq War and the Severe Acute Respiratory Syndrome epidemic.
2005	18.15	2.8%	

Notes:

^a Periods of U.S. economic recession are highlighted. The duration of U.S. economic recession is measured from peak to trough.

Sources:

Wayne County Airport Authority records.

Detroit Metropolitan Wayne County Airport Master Plan Study. Draft March 10, 1993.

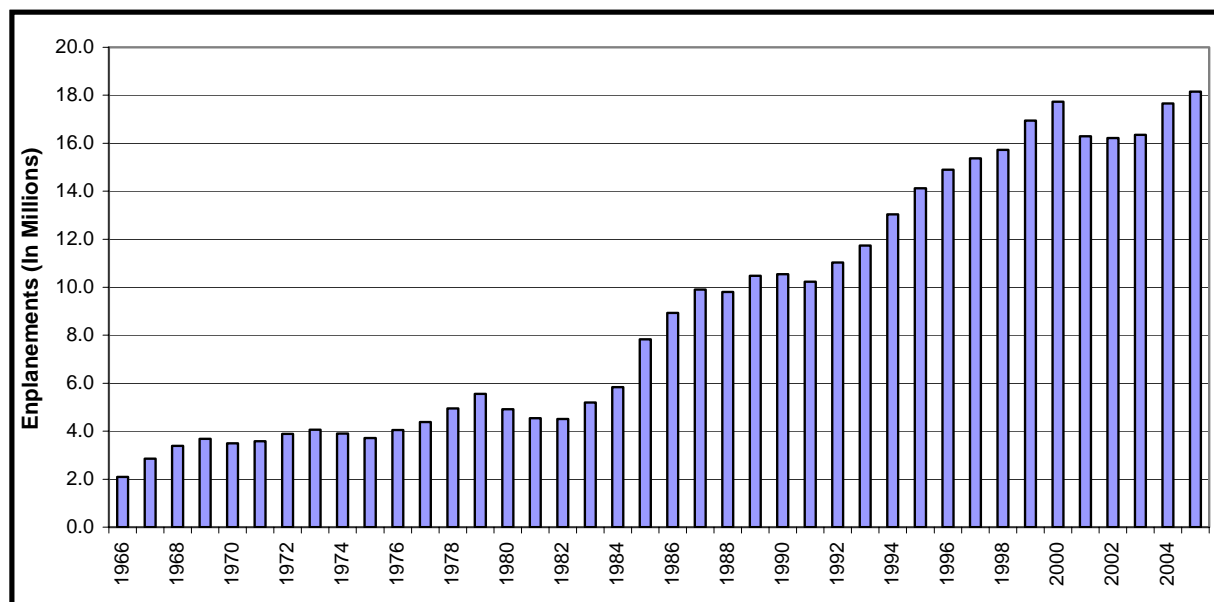
Business Cycle Expansions and Contractions. National Bureau of Economic Research (NBER) Website, November 2, 2004.

3.1.3 Annual Enplanements, 1966-2005

Since the Davey Terminal opened in 1966 (replaced by the McNamara Terminal in February 2002), annual enplanements had grown from 2.1 million to 18.2 million in 2005 at an average annual rate of 5.7 percent (**Exhibit 3.1-2**). Enplanement growth accelerated particularly since 1984, when Republic Airlines (Republic) established hub operations at the Airport. Republic subsequently merged with Northwest in 1986, and Northwest took over and expanded Republic’s hub operations at the Airport.

Total enplanements at the Airport increased 36.5 percent in 1967 – the second year of Airport operation since the opening of the Davey Terminal – and an average of 3.8 percent annually thereafter through 1983. From 1984, the year Republic began operating a system hub at the Airport, through 2005, Airport enplanements grew at an average rate of 5.8 percent annually.

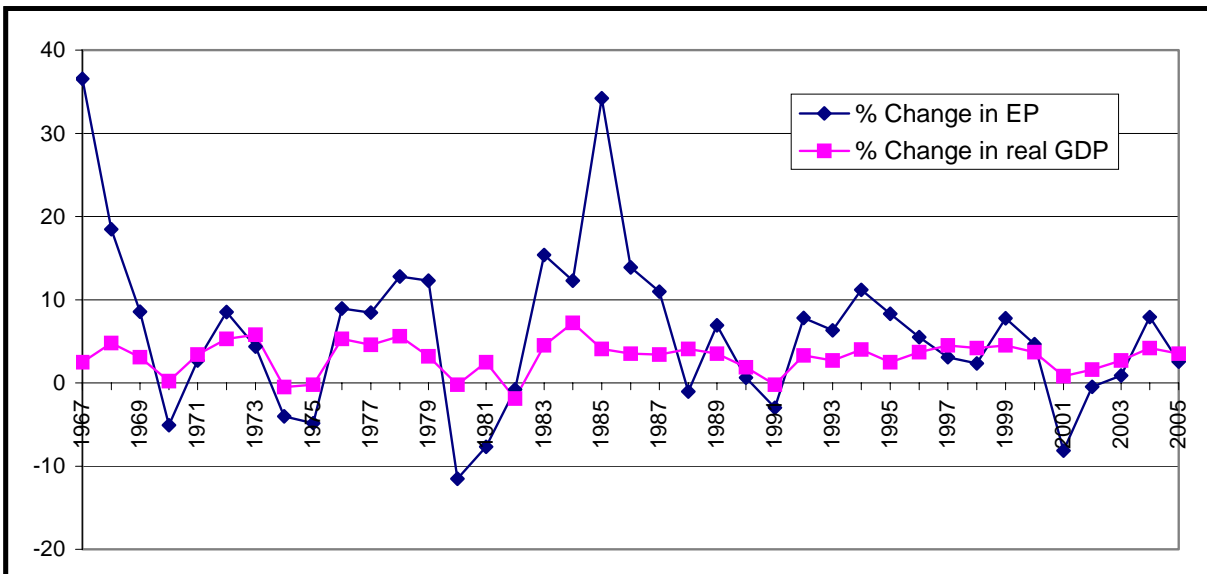
Exhibit 3.1-2 Annual Enplanements at DTW, CY 1966-2005



Source: Wayne County Airport Authority records. See **Table 3.1-3** for the source data.

The trends in enplanement growth at the Airport generally followed the U.S. business cycles: Enplanements increased during periods of economic expansion and decreased during periods of economic recession. The Airport experienced declines in enplanements in 10 years of its nearly 40-year history since 1966. In all but one year (1988), the decline in enplanements coincided with an economic recession (**Table 3.1-3 and Exhibit 3.1-3**). The negative effects of U.S. economic recessions were compounded by the Gulf War in 1991 and by the September 11, 2001, terrorist attacks on the aviation system.

Exhibit 3.1-3 Annual Percent Change in Enplanements at DTW and real U.S. GDP, CY 1967-2005



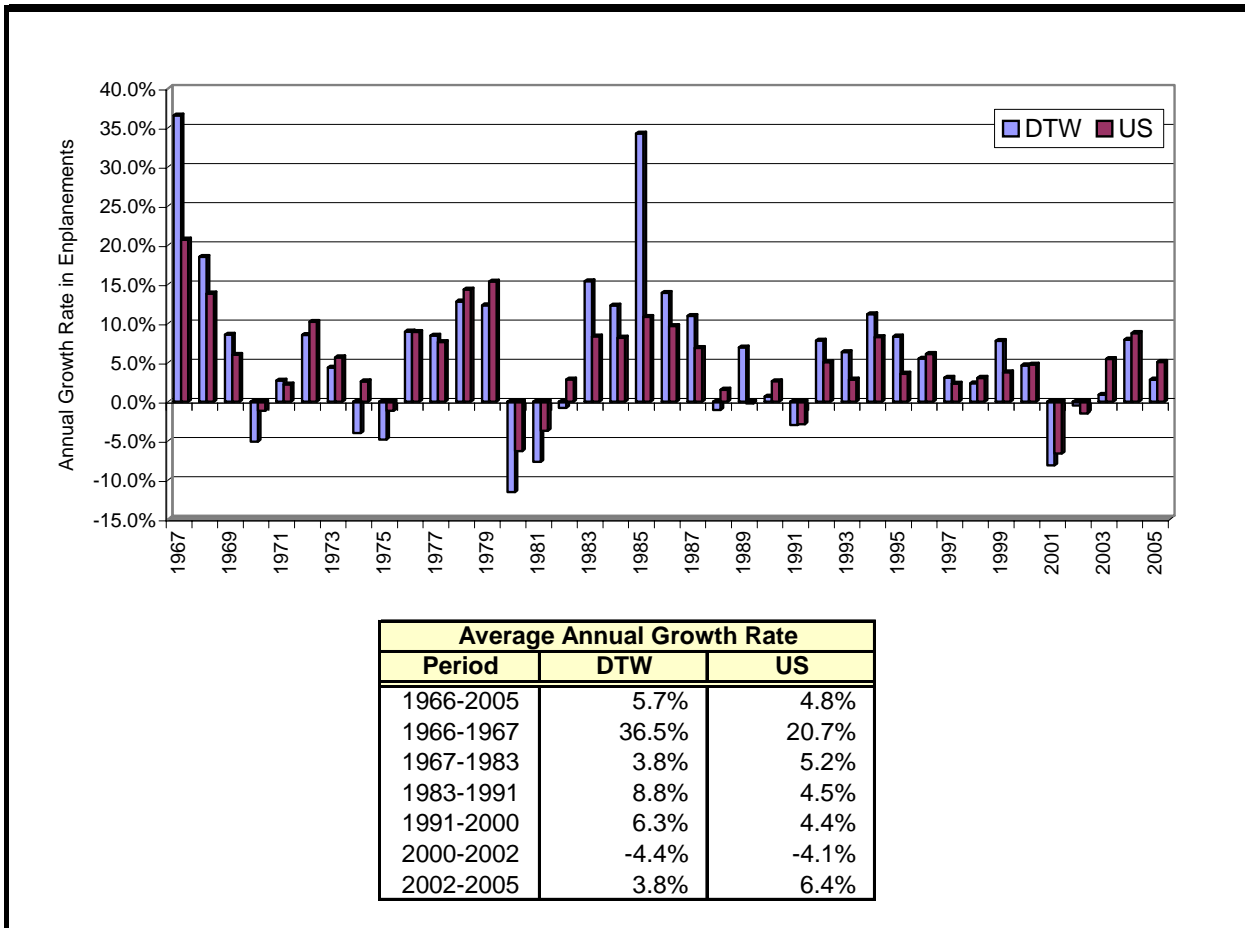
Sources: Wayne County Airport Authority records.
 U.S. Bureau of Economic Analysis.

3.1.4 DTW and U.S. Total Enplanements

Exhibit 3.1-4 compares the enplanement growth trends at the Airport with national growth trends. **Exhibit 3.1-4** uses available data from the Air Transport Association (ATA) on U.S. total enplaned passengers on scheduled services by U.S. airlines to represent the national growth trends. This is considered a valid comparison because scheduled services by U.S. airlines account for approximately 98 percent of total enplanements at the Airport.

The Airport has gone through various stages of growth in the 39 years since it became the principal commercial airport in the Detroit CMSA. Annual enplanements grew at a relatively moderate rate of 3.8 percent, on average, from 1967 to 1983 – slower than the 5.2 percent average annual rate of growth in U.S. enplanements during this period. Enplanement growth accelerated after Republic started hub operations at the Airport in 1984, especially after Republic merged with Northwest in 1986 and Northwest expanded the system hub. Enplanements at the Airport grew at an average annual rate of 8.8 percent between 1983 and 1991, and 6.3 percent between 1991 and 2000 – more rapidly than experienced nationwide (4.5 percent, between 1983 and 1991; and 4.4 percent between 1991 and 2000).

Exhibit 3.1-4 Annual Growth Rates in Airport and U.S. Total Enplanements, CY 1967-2005



Note: The data for DTW represent total enplanements on scheduled and nonscheduled services by all airlines, while the data for the United States represent total enplanements on U.S. airline scheduled services only.

Sources:

Wayne County Airport Authority records.

Air Transport Association, *Annual Operations, Traffic and Capacity, U.S. Airlines -- Scheduled Services*.

In 2001 the U.S. economy went into recession, and the events of September 11, 2001, caused a five-day shutdown of the entire aviation system and long-lasting changes in the travel market and the airline industry. The Airport and the entire industry suffered declines in enplanements for the following two consecutive years. The Airport suffered slightly greater losses in enplanements – averaging 4.4 percent per year in 2001 and 2002 – as compared to the entire industry, which recorded enplanement losses of 4.1 percent per year on average. Passenger traffic began to recover in 2003. However, enplanement growth at the Airport – averaging 3.8 percent between 2002 and 2005 – was slower than the 6.4 percent average annual enplanement growth industry-wide.

In the last three years (2003-2005), the Airport accounted for 2.5 percent of annual scheduled enplanements by U.S. airlines – a slight decrease from an annual share of 2.6-2.7 percent during the previous eight years.

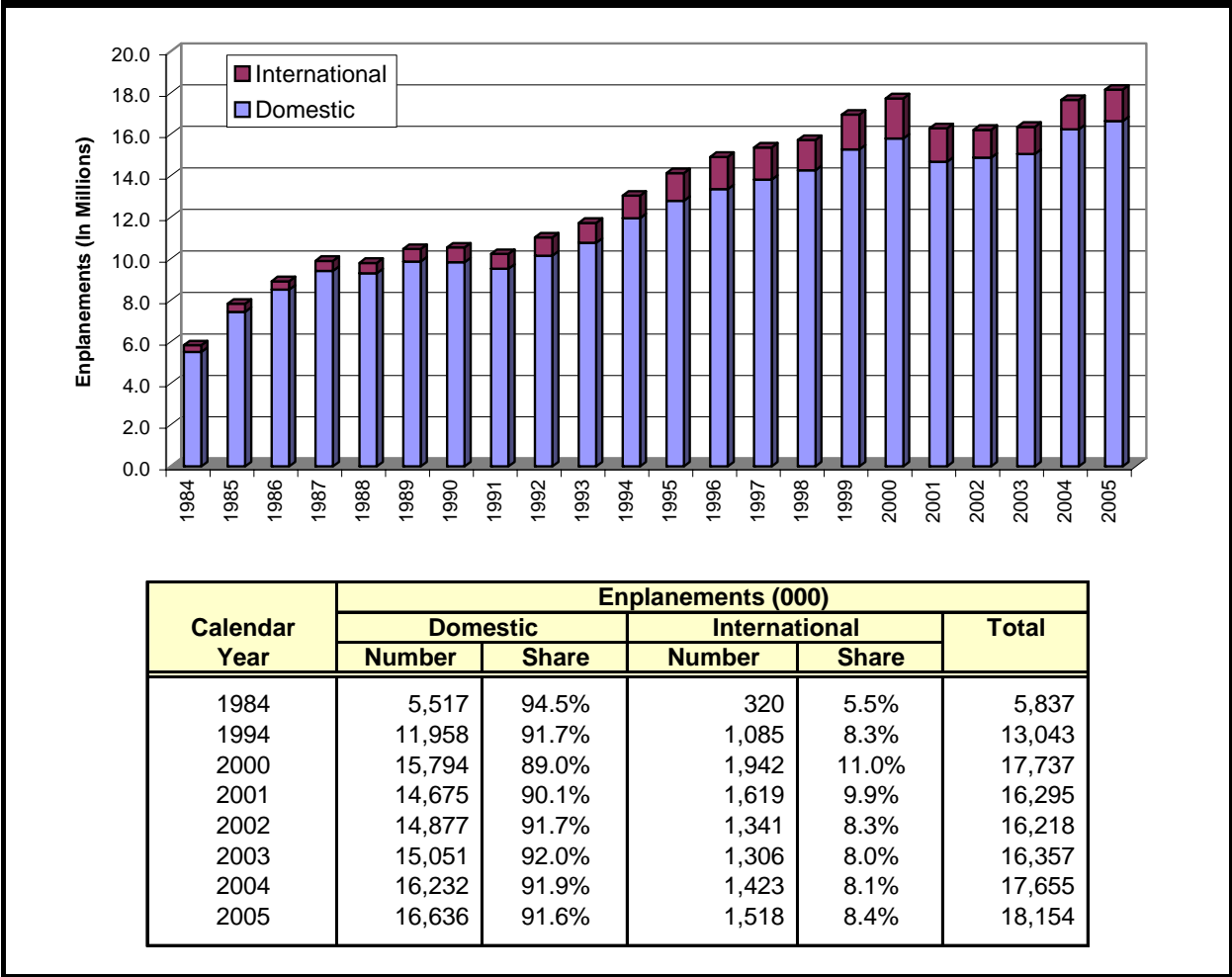
Exhibit 3.1.4 shows that the annual growth trends in enplanements at the Airport generally tracked national trends. On average, enplanements grew faster at DTW, averaging 5.7 percent annually between 1966 and 2005. By comparison, total U.S. enplanements grew at an average annual rate of 4.8 percent during the same period.

3.1.5 Domestic and International Enplanements, 1984-2005

Exhibit 3.1-5 and **Exhibit 3.1-6** present historical trends in domestic and international enplanements at DTW from 1984 through 2005.

The Airport predominantly serves domestic passengers. In 2005, domestic traffic accounted for 91.6 percent of total Airport enplanements, a decrease in share from 94.5 percent in 1984. Domestic enplanements increased from 5.52 million in 1984 to a record 16.64 million in 2005, at an average annual rate of 4.1 percent. The 16.64 million domestic enplanements in 2005 surpassed the previous peak of 15.79 million in 2000 by 5.3 percent. Domestic enplanements grew more rapidly between 1984 and 1994, at 8.0 percent per year, than they did between 1994 and 2004 at 3.1 percent per year. Growth continued to slow to 2.5 percent in 2005.

Exhibit 3.1-5 Domestic and International Enplanements at DTW, CY 1984-2005

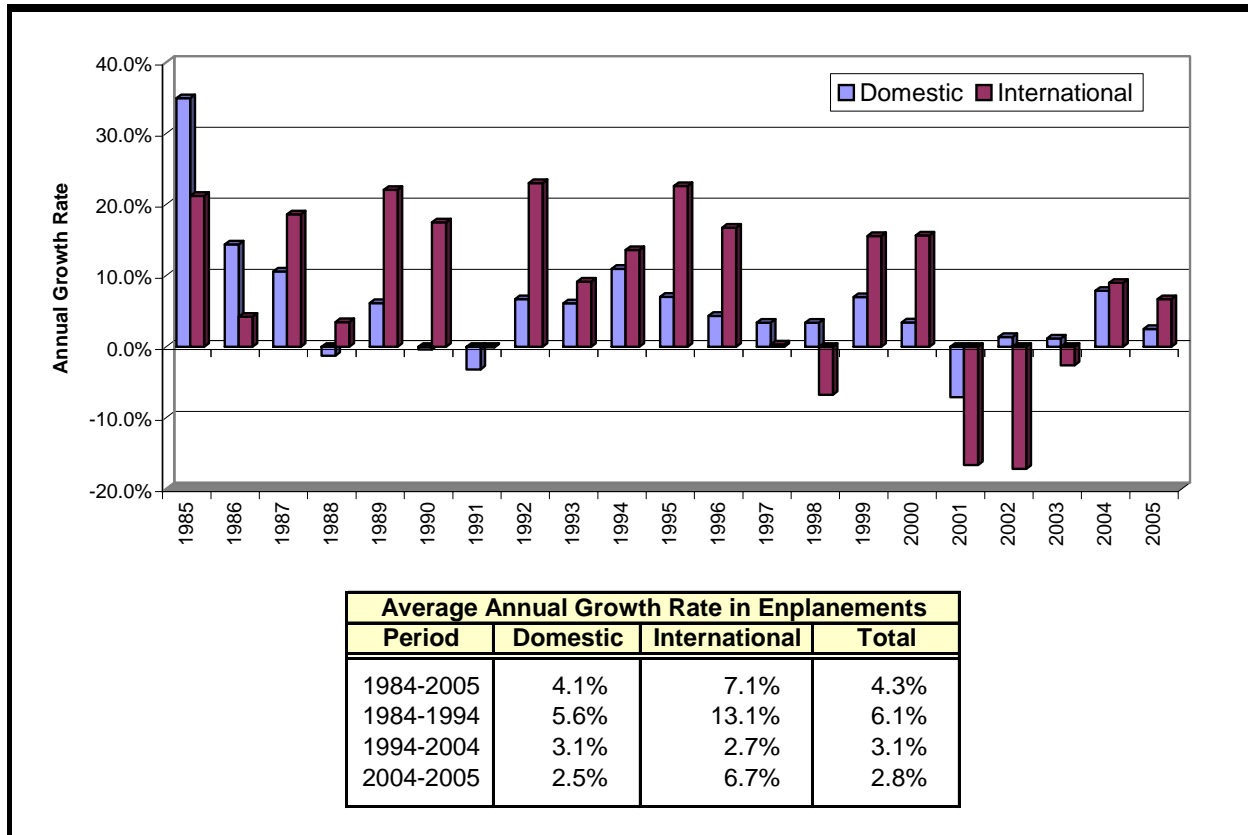


Source: Wayne County Airport Authority records.

International traffic accounted for 8.4 percent of total Airport enplanements in 2005, an increase in share from 5.5 percent in 1984. International enplanements increased from 320,127 in 1984 to a peak of 1.94 million in 2000, then decreased to 1.31 million in 2003 before increasing to 1.52 million in 2005. These trends represent an average annual growth rate of 7.1 percent between 1984 and 2005. International enplanements grew at a rapid rate of 13.1 percent per year between 1984 and 1994. Then growth slowed to a rate of 2.7 percent per year, on average, between 1994 and 2004, with large percentage decreases particularly in 2001 and 2002. International enplanements increased 6.7 percent in 2005.

In 2005 the following airlines carried international traffic at the Airport: British Airways, Lufthansa Airlines, Mesaba, Northwest Airlines, Air France, Champion Air, Condor, Royal Jordanian, Ryan International, TransMeridian (until September 2005), and USA 3000. Northwest, together with its regional affiliate Mesaba, accounted for 81.1 percent of total international enplanements at the Airport in 2005.

Exhibit 3.1-6 Annual Growth Rates in Domestic and International Enplanements at DTW, CY 1984-2005

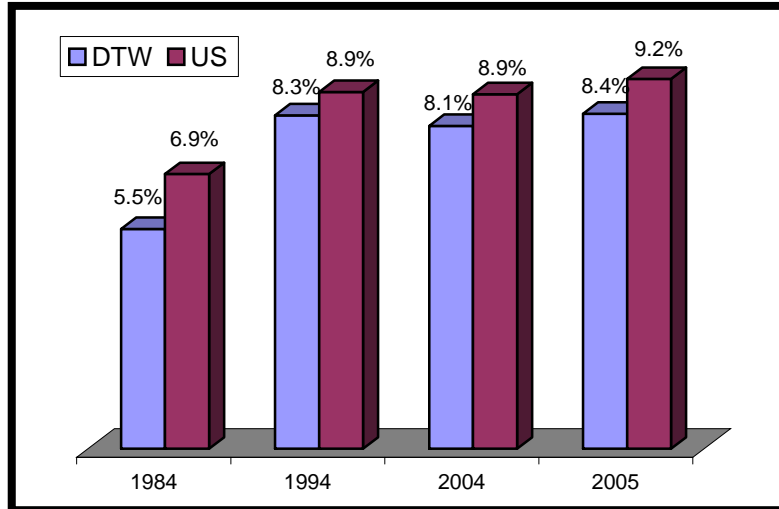


Source: Wayne County Airport Authority records.

Exhibit 3.1-7 compares the trends in the international share of total enplanements at the Airport with the trends nationwide, using data on enplanements by U.S. airlines providing scheduled service. Historically the international share of total enplanements at the Airport has been slightly smaller than the international share nationwide. The trends that the Forecast observed at the Airport – the significant increase in the international share of enplanements from 1984 to 1994 and the stabilization of that share between 1994 and 2005 – are consistent with the nationwide trends.

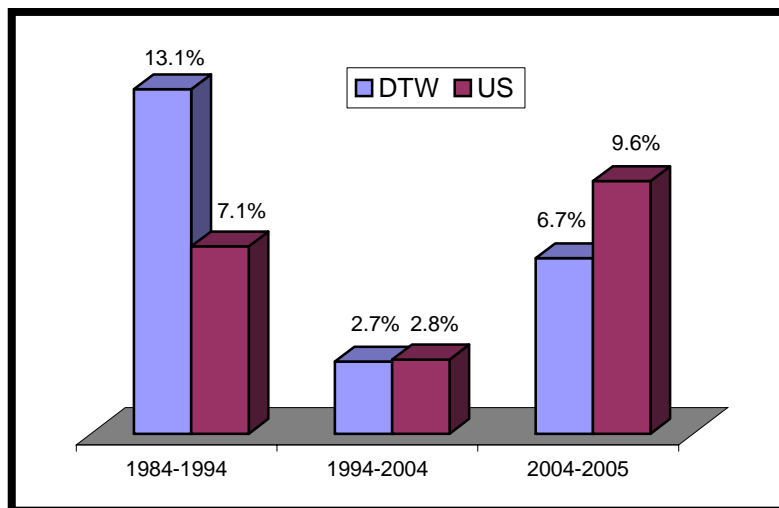
Exhibit 3.1-8 compares the average annual growth rates in international enplanements at the Airport with those for the United States during the periods 1984-1994, 1994-2004 and 2004-2005. Between 1984 and 2004, international enplanements grew more rapidly at the Airport than nationwide as Northwest expanded its international service from DTW. The growth in international traffic at the Airport closely tracked national trends between 1994 and 2004, and lagged behind the national growth in 2005.

**Exhibit 3.1-7 International Traffic as a Percentage of Total Enplanements at DTW and in the United States
 CY 1984, 1994, 2004 and 2005**



Sources: Wayne County Airport Authority records
 Air Transport Association, *Annual Operations, Traffic and Capacity, U.S. Airlines -- Scheduled Services.*

Exhibit 3.1-8 Average Annual Growth Rate of International Enplanements at DTW and in the United States, CY 1984-1994, CY 1994-2004, and CY 2004-2005

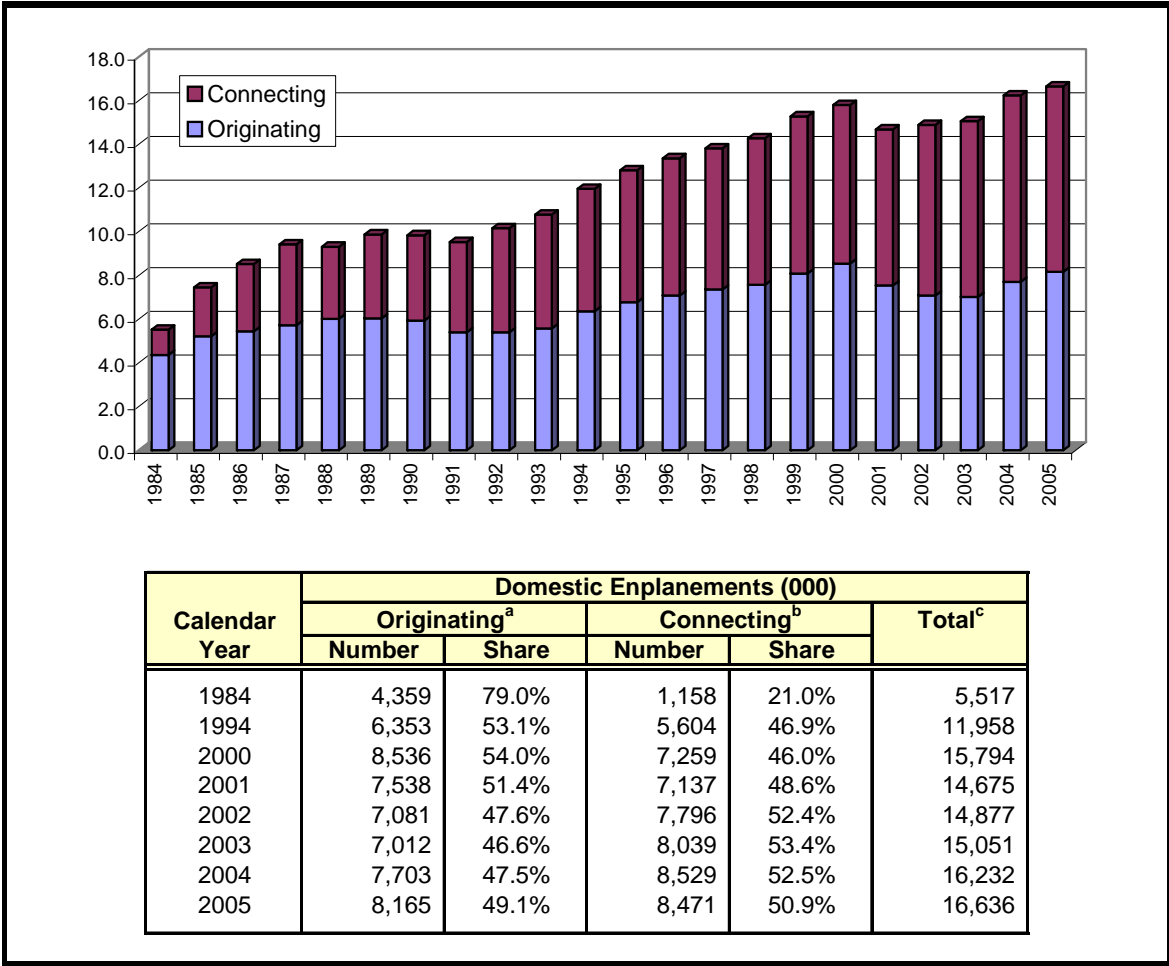


Sources: Wayne County Airport Authority records
 Air Transport Association, *Annual Operations, Traffic and Capacity, U.S. Airlines -- Scheduled Services.*

3.1.6 Domestic Originating and Connecting Enplanements, 1984-2005

Exhibit 3.1-9 and Exhibit 3.1-10 show the historical trends in domestic originating and connecting enplanements from 1984 through 2005. Estimates of the number of domestic enplaned passengers originating from the Airport are based on the U.S. Department of Transportation OD1A data collected from a 10-percent ticket survey. Wayne County Airport Authority (WCAA) records provide data on annual domestic enplanements. Connecting enplanements are calculated as the difference between total domestic enplanements and estimated domestic originating enplanements.

Exhibit 3.1-9 Domestic Originating and Connecting Enplanements at DTW, CY 1984-2005

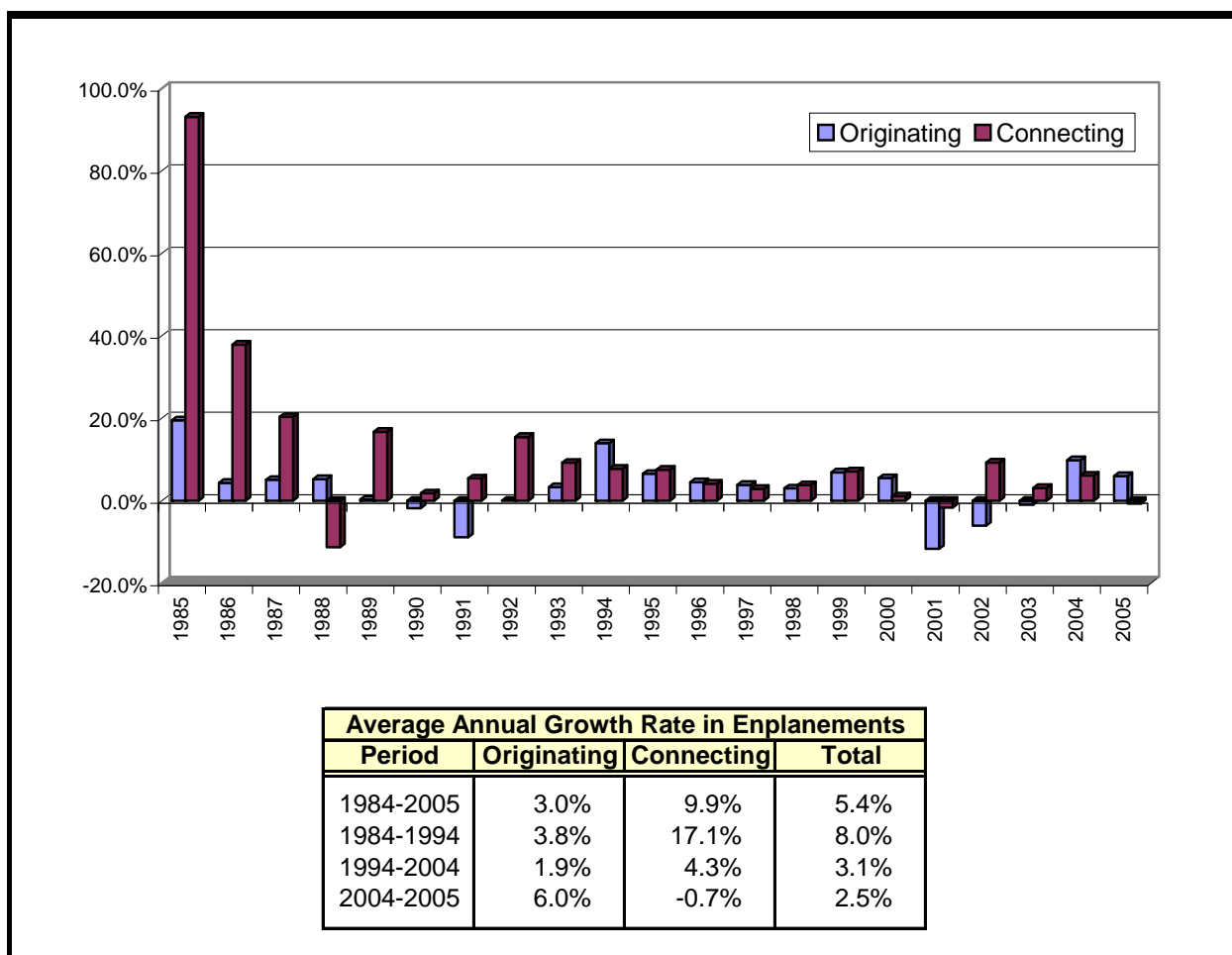


Notes:
^a Estimates of domestic originating enplanements were obtained from the BACK Aviation Solutions/U.S. Department of Transportation OD1A data (10% Ticket Survey).
^b Connecting enplanements were calculated as the residual after subtracting estimates of domestic originating enplanements from total domestic enplanements.
^c Figures on total domestic enplanements were obtained from the Wayne County Airport Authority records.

Sources: Wayne County Airport Authority records.
 BACK Aviation Solutions/U.S. Department of Transportation OD1A data.

Domestic originating enplanements increased from approximately 4.36 million in 1984 to a peak of approximately 8.54 million in 2000. Subsequently domestic originating enplanements declined for three consecutive years to approximately 7.01 million in 2003, before increasing to approximately 8.17 million in 2005 – still 4.3 percent short of the 2000 peak. These trends represent average annual growth rates of 3.8 percent between 1984 and 1994, 1.9 percent between 1994 and 2004, and 6.0 percent in 2005. Overall domestic originating enplanements increased 3.0 percent over the 21-year period between 1984 and 2005. The originating share of total domestic enplanements decreased from 79.0 percent in 1984 to 49.1 percent in 2005, mainly due to the development of the Airport as a major hub for Northwest and the concomitant increase in connecting traffic.

Exhibit 3.1-10 Annual Growth Rates in Domestic Originating and Connecting Enplanements at DTW, CY 1985-2005



Sources: Wayne County Airport Authority records.
 BACK Aviation Solutions/U.S. Department of Transportation OD1A data.

Domestic connecting enplanements increased from approximately 1.16 million in 1984 to 8.47 million in 2005 at an average annual rate of 9.9 percent. Rapid growth occurred between 1984 and 1994, averaging 17.1 percent annually. Between 1994 and 2004, domestic connecting enplanements grew at a more moderate rate of 4.3 percent annually. In 2005, connecting enplanements are

estimated at 8.47 million, representing a decrease of 0.7 percent from the previous year. In share, connecting enplanements increased from 21.0 percent of total domestic enplanements in 1984 to 50.9 percent in 2005.

Connecting enplanements suffered only a small percentage decline in 2001, when the U.S. economy went into recession and the terrorist attacks took place, and then resumed growth in the following year. In contrast, originating enplanements suffered proportionately larger losses that persisted through 2003.

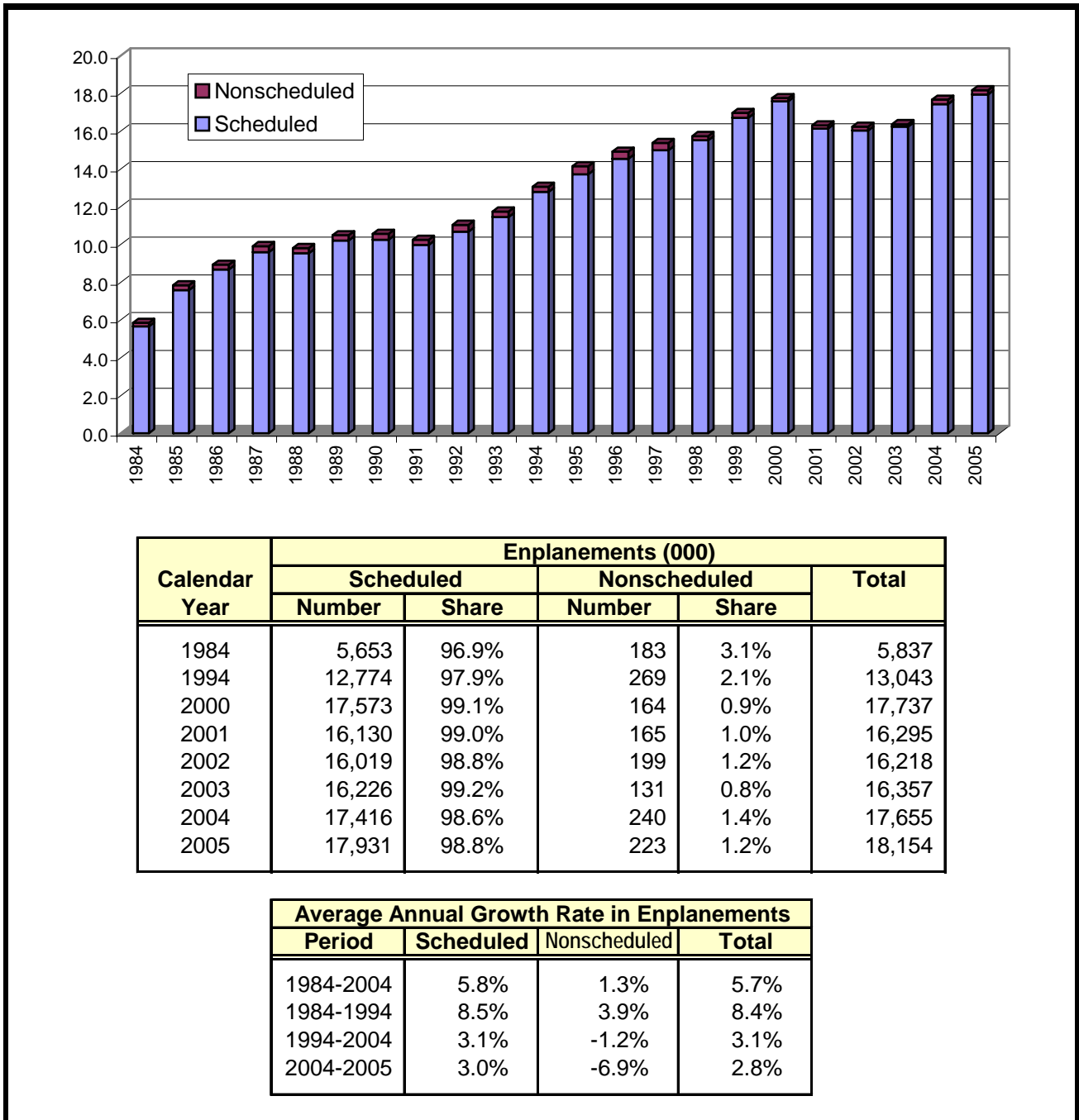
3.1.7 Scheduled and Nonscheduled Enplanements, 1984-2005

Exhibit 3.1-11 shows the trends in scheduled and nonscheduled enplanements at DTW from 1984 through 2005.

Scheduled service accounted for the predominant share of total enplanements, which increased from 96.9 percent in 1984 to 98.6 percent in 2004. Scheduled enplanements increased from 5.65 million in 1984 to 17.42 million in 2004 at an average rate of 3.1 percent annually. In 2005 scheduled enplanements reached 17.93 million, representing a share of 98.8 percent and an increase of 3.0 percent from the previous year.

Nonscheduled (charter) service accounted for a very small share of total enplanements, which decreased from 3.1 percent in 1984 to 1.4 percent in 2004. Nonscheduled enplanements increased from 183,325 in 1984 to 239,417 in 2004 at an average annual rate of 1.3 percent. During the four years prior to 2004, however, nonscheduled enplanements ranged only between 131,000 and 199,000. In 2005 nonscheduled enplanements reached 222,969, representing a share of 1.2 percent and a decrease of 6.9 percent from the previous year. In 2005, the following airlines provided nonscheduled passenger service: Allegiant, Champion Air, Condor, Independence Air, Royal Jordanian, Ryan International, TransMeridian, and USA 3000. TransMeridian ceased operations on September 30, 2005, and Independence Air ceased operations in January 2006.

Exhibit 3.1-11 Scheduled and Nonscheduled Enplanements at DTW, CY 1984-2005

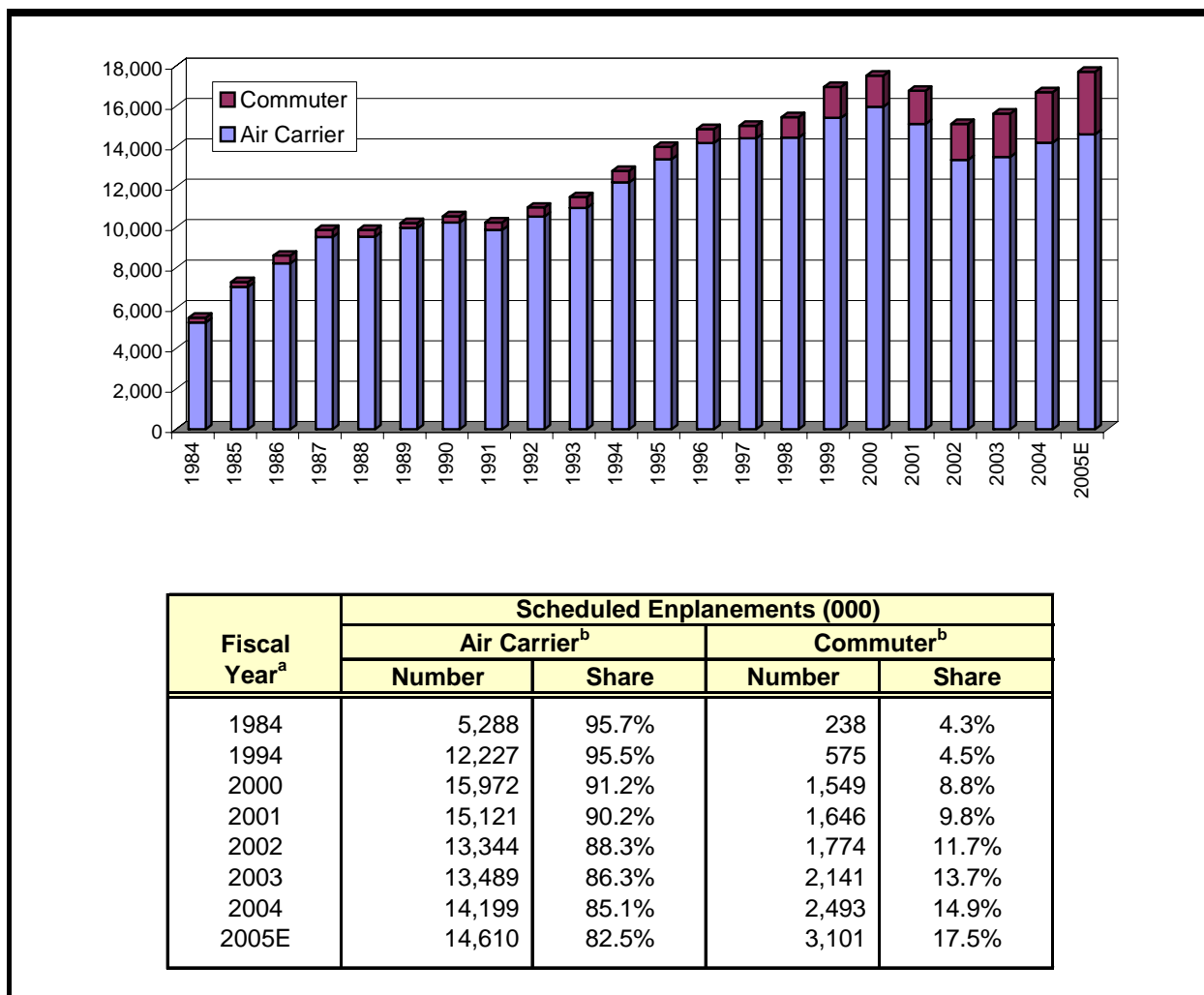


Source: Wayne County Airport Authority records.

3.1.8 Air Carrier and Commuter Enplanements, FY 1984-2005

Using historical data from the FAA Terminal Area Forecasts, **Exhibit 3.1-12** and **Exhibit 3.1-13** show the trends in enplanements at DTW by air carrier group from Fiscal Year⁴ (FY) 1984 to 2005. In the Terminal Area Forecasts, the FAA classifies airlines into air carriers-- those that operate aircraft with 60 seats or more-- and commuters, those that operate aircraft with less than 60 seats. Commuter airlines include those that operate piston, turboprop and regional jet aircraft with less than 60 seats.

Exhibit 3.1-12 Air Carrier and Commuter Enplanements at DTW, FY 1984-2005



Notes:

^a The federal fiscal year runs from October 1 through September 30.

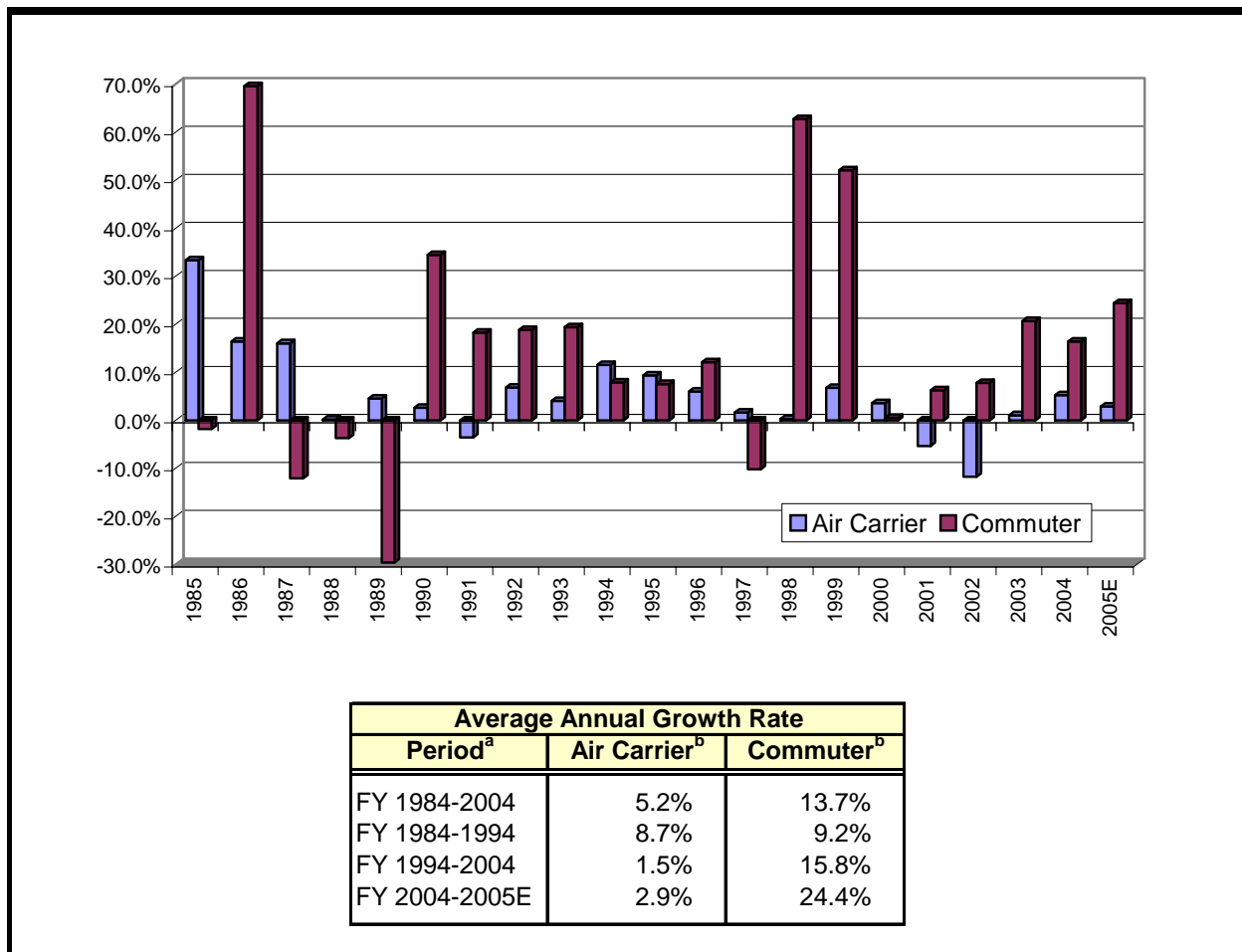
^b By FAA classification, air carriers operate aircraft with 60 seats or more, and commuters operate aircraft with less than 60 seats.

Source: Federal Aviation Administration, Terminal Area Forecasts, FY 2005-2025, February 2006.

⁴ The federal fiscal year runs from October 1 through September 30.

Air carriers accounted for the predominant share of enplanements at DTW. This share, however, decreased from 95.7 percent in FY 1984 to approximately 85.1 percent in FY 2004 because of the rapid expansion of commuter activity and the slowdown in the growth of air carrier activity during the past ten years. Air carrier enplanements increased from 5.29 million in FY 1984 to a peak of 15.97 million in FY 2000, and then declined for two consecutive years, reaching a low of 13.34 million in FY 2002. Air carrier enplanements have since increased to 14.20 million in FY 2004 and an estimated 14.61 million in FY 2005. The annual growth rate in air carrier enplanements averaged 8.7 percent between 1984 and 1994, 1.5 percent between 1994 and 2004, and 5.2 percent over the 20-year period. In 2005, air carrier enplanements were estimated to increase 2.9 percent.

Exhibit 3.1-13 Annual Growth Rates in Air Carrier and Commuter Enplanements at DTW, FY 1985-2005



Notes:

^a The federal fiscal year runs from October 1 through September 30.

^b By FAA classification, air carriers operate aircraft with 60 seats or more, and commuters operate aircraft with less than 60 seats.

Source: Federal Aviation Administration, Terminal Area Forecasts, FY 2005-2025, February 2006.

The commuter share of scheduled enplanements at DTW increased more than three-fold, from 4.3 percent in FY1984 to 14.9 percent in FY 2004. The number of commuter enplanements increased more than ten-fold, from 237,868 in FY 1984 to 2.49 million in FY 2004. The annual growth rate in commuter enplanements averaged 9.2 percent between FY 1984 and FY 1994, 15.8 percent between FY 1994 and FY 2004, and 13.7 percent over the entire 20-year period. In 2005, commuter enplanements were estimated at 3.10 million, accounting for a share of 17.5 percent of scheduled enplanements and increasing 24.4 percent from the previous year.

The expansion of commuter activity at DTW is consistent with industry trends. Airlines have been increasingly transferring routes from their mainline service to regional/commuter operators in order to match supply with demand more efficiently through the use of smaller aircraft. In particular, smaller aircraft have been used to feed traffic from small, short-haul markets to hubs, and to introduce or increase frequency of service at relatively small markets. The expansion of commuter activity accelerated with the introduction of regional jets into the fleet and post-9/11 restructuring efforts in the airline industry.

3.1.9 Scheduled Enplanements by Airline, CY 2000, 2004, and 2005

Table 3.1-4 shows scheduled enplanements by airline at DTW in 2000, 2004 and 2005. **Exhibit 3.1-14** shows the scheduled enplanement shares of Northwest, Northwest AirlinK operators, low-cost carriers, foreign flag carriers and other airlines in 2000 and 2005.

Northwest operates a major hub at the Airport. Northwest and its regional affiliates accounted for a combined share of 79.3 percent of scheduled enplanements at the Airport in 2005, up from 77.5 percent in 2000. Like other mainline carriers, Northwest has also been shifting some service to its regional affiliates (Northwest AirlinK operators Mesaba and Pinnacle) in recent years in order to take advantage of the operational economies of regional aircraft. This shift from mainline to regional service resulted in a decrease in Northwest's share of scheduled enplanements from 69.3 percent in 2000 to 64.3 percent in 2005 and an increase in share of Northwest AirlinK operators from 8.2 percent in 2000 to 15.0 percent in 2005.

The second largest scheduled airline at DTW is a low-cost carrier, Spirit Airlines. Spirit accounted for 4.1 percent of scheduled enplanements in 2005, up from 2.5 percent in 2000. The other low-cost carriers that served DTW as of 2005 were Southwest, America West and US Airways (merged in September 2005), Independence Air (until January 2006), Frontier (beginning in 2005), and Air Tran (beginning in November 2005). The combined share of scheduled enplanements of low-cost carriers increased from 7.1 percent in 2000 to 10.3 percent in 2005.

Table 3.1-4 Scheduled Enplanements by Airline, CY 2000, CY 2004, and CY 2005

Airline	Scheduled Enplanements					
	CY 2000		CY 2004		CY 2005	
	Number	Share	Number	Share	Number	Share
Air Carrier^a						
Air France					30,259	0.2%
Air Tran ^c					20,750	0.1%
America West ^c	186,984	1.1%	229,188	1.3%	268,007	1.5%
American	459,125	2.6%	445,421	2.6%	484,816	2.7%
American Trans Air	95,504	0.5%				
British Airways ^d	84,807	0.5%	58,320	0.3%	60,453	0.3%
Champion Air					21,933	
Continental	342,838	2.0%	225,797	1.3%	227,454	1.3%
Delta	442,257	2.5%	307,518	1.8%	284,569	1.6%
Frontier ^c					45,110	0.3%
KLM Royal Dutch ^d	137,285	0.8%				
Lufthansa ^d			73,979	0.4%	70,240	0.4%
Northwest	12,169,545	69.3%	11,697,449	67.2%	11,549,611	64.3%
Southwest ^c	527,923	3.0%	458,438	2.6%	479,562	2.7%
Spirit ^c	432,390	2.5%	852,668	4.9%	736,059	4.1%
Sun Country	181,765	1.0%				
Trans World	215,718	1.2%				
United	389,171	2.2%	337,991	1.9%	290,722	1.6%
United Express/Skywest ^e					12,090	0.1%
US Airways	262,401	1.5%	57,140	0.3%	86,469	0.5%
Subtotal - Air Carrier	15,927,713	90.6%	14,743,909	84.7%	14,668,104	81.6%
Commuter^b						
Air Canada ^d			13,625	0.1%	10,508	0.1%
Air Canada Jazz					3,600	0.0%
American Eagle					45,699	0.3%
Canadian Regional ^d	903	0.0%				
Continental Express/CommutAir			70	0.0%	6,538	0.0%
Continental Express/ExpressJet	36,156	0.2%	68,295	0.4%	61,060	0.3%
Delta Connection/Atlantic Southeast			3,296	0.0%	3,197	0.0%
Delta Connection/Comair	107,462	0.6%	95,515	0.5%	112,225	0.6%
Delte Express/Shuttle A					14,657	0.1%
Independence Air ^c			22,759	0.1%	58,115	0.3%
Northwest Airlink/Mesaba	1,442,241	8.2%	997,478	5.7%	1,170,723	6.5%
Northwest Airlink/Pinnacle			1,277,243	7.3%	1,528,905	8.5%
United Express/Air Wisconsin			10,683	0.1%	16,025	0.1%
United Express/Atlantic Coast	16,391	0.1%	29,409	0.2%		
United Express/Mesa			20,566	0.1%	70,729	0.4%
United Express/Skywest			807	0.0%		
US Airways Express/Air Wisconsin					16,554	0.1%
US Airways Express/Allegheny	17,040	0.1%				
US Airways Express/Chautauqua	242	0.0%	9,896	0.1%	3,084	0.0%
US Airways Express/Mesa			73,604	0.4%	45,813	0.3%
US Airways Express/Piedmont			872	0.0%	655	0.0%
US Airways Express/PSA	5,261	0.0%	19,835	0.1%	67,828	0.4%
US Airways Express/Trans States	18,750	0.1%	27,907	0.2%	26,885	0.1%
US Airways Express/Charter	113	0.0%				
UPS Passenger Service	551	0.0%				
Subtotal - Commuter	1,645,110	9.4%	2,671,860	15.3%	3,299,089	18.4%
Total - Scheduled	17,572,823	100.0%	17,415,769	100.0%	17,967,193	100.0%

Notes:

^a In the Terminal Area Forecast, the FAA classifies airlines that operate aircraft with 60 seats or more as air carriers. Therefore, this airline classification can include regional airlines that operate regional jet aircraft with more than 60 seats.

^b In the Terminal Area Forecast, the FAA classifies airlines that operate aircraft with less than 60 seats as commuters. Therefore this classification includes airlines that operate regional jet and turboprop aircraft with less than 60 seats.

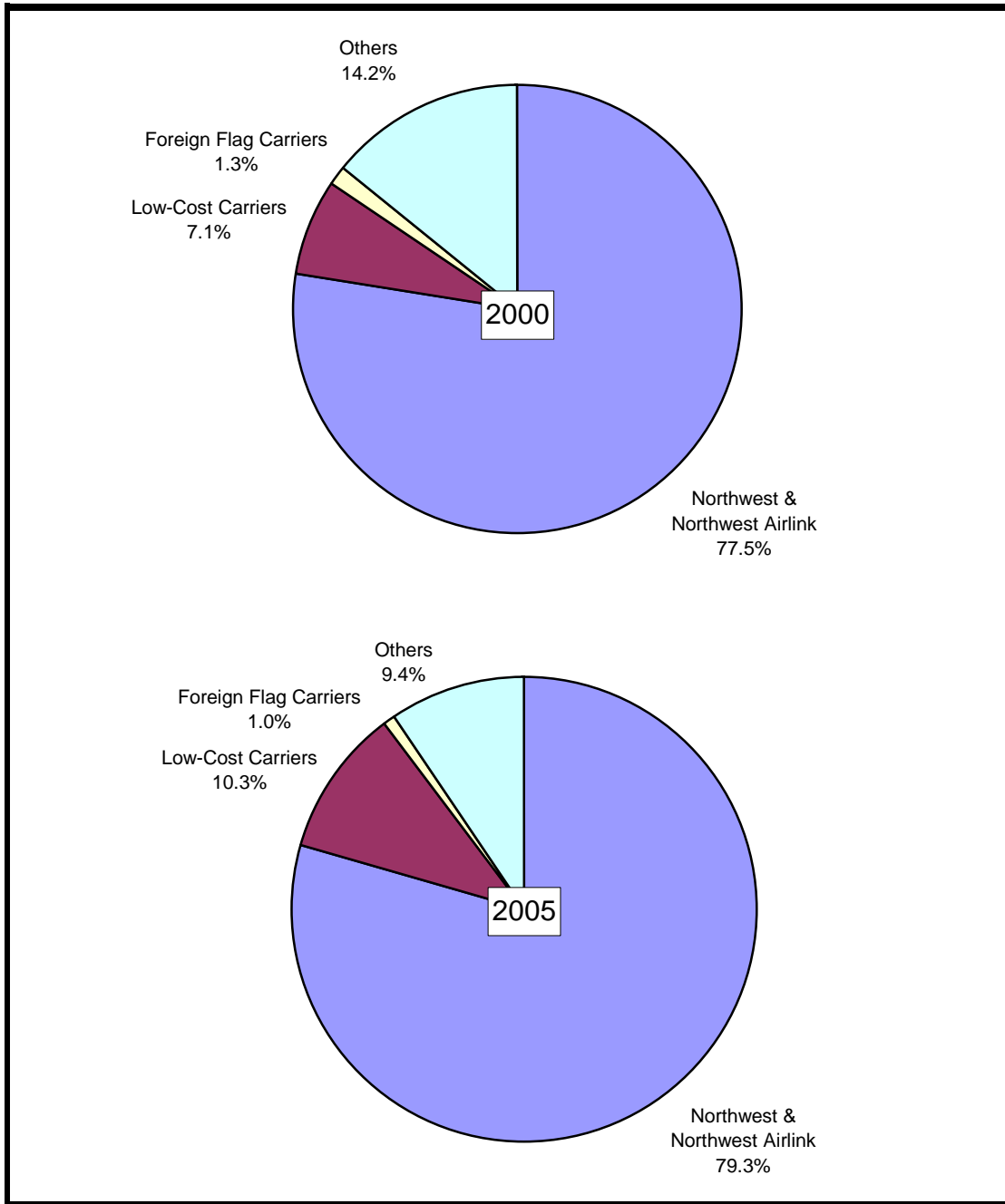
^c Low-cost carriers.

^d Foreign flag carriers.

^e Skywest is classified under air carrier because it operated a regional jet aircraft with more than 60 seats in 2005.

Source: Wayne County Airport Authority records.

Exhibit 3.1-14 Airline Market Share - Scheduled Enplanements, CY 2000 and CY 2005



Source: Wayne County Airport Authority records.

Foreign flag carriers Air France, British Airways, KLM Royal Dutch, Lufthansa, Canadian Regional, Air Canada and Air Canada Jazz accounted for a combined share of 1.0 percent in 2005, down from 1.3 percent in 2000. KLM Royal Dutch and Canadian Regional no longer operated in 2004. Air France and Air Canada Jazz began service in 2005.

The rest of the airlines operating at DTW accounted for 9.4 percent of scheduled enplanements in 2005, down from 14.2 percent in 2000.

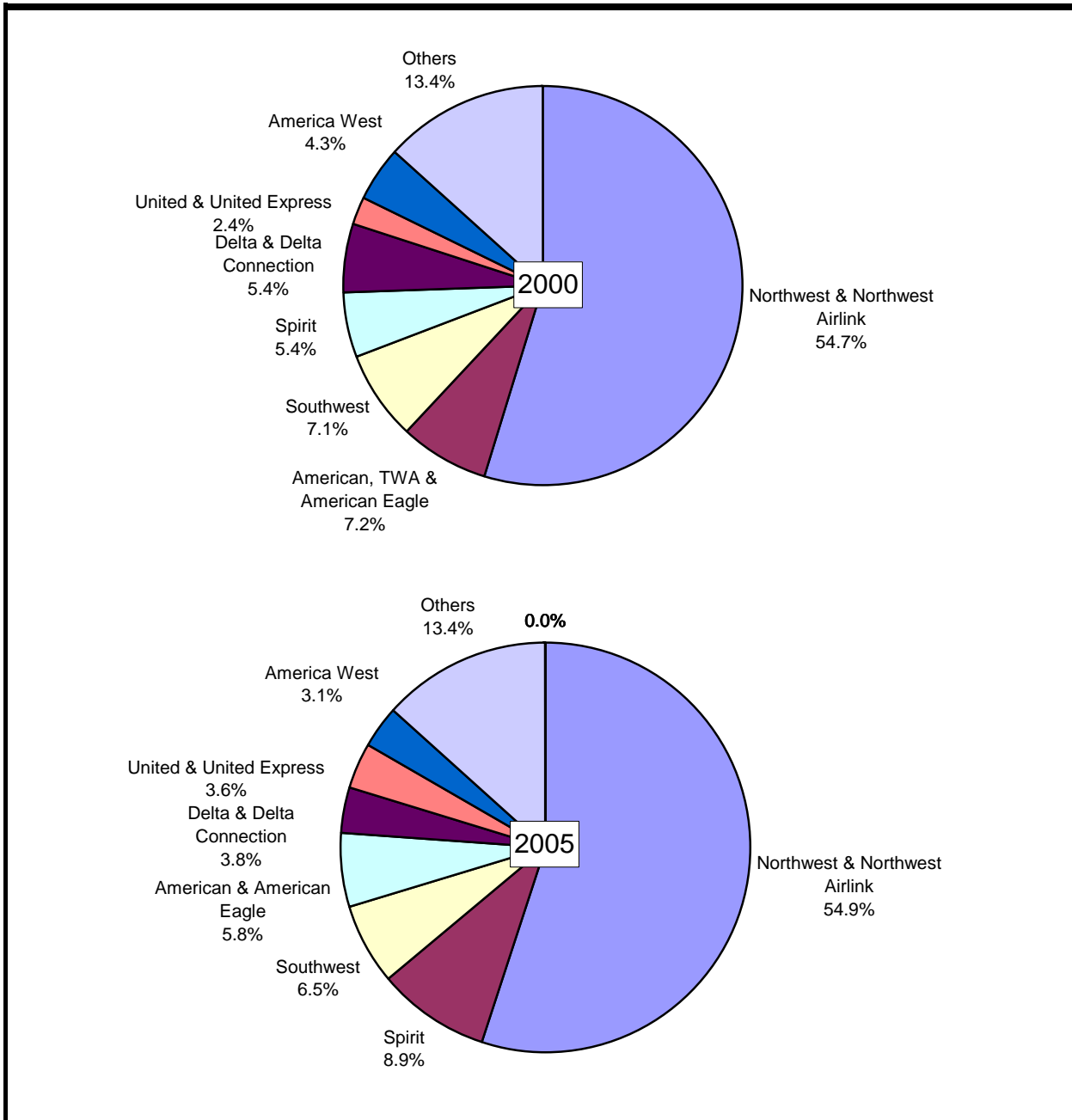
Exhibit 3.1-15 shows the distribution of domestic originating enplanements by airline in 2000 and 2005. In 2000 Northwest and Northwest AirlinK operators together held the largest share of 54.7 percent of domestic originating enplanements, followed by American, TWA and American Eagle with a combined share of 7.2 percent, and Southwest with 7.1 percent. In 2005 Northwest and Northwest AirlinK operators continued to hold the largest share of 54.9 percent, followed by Spirit with 8.9 percent and Southwest with 6.5 percent.

3.1.10 Top 20 Domestic Origin & Destination (O&D) Markets

Table 3.1-5 lists the Airport's top 20 domestic O&D markets in 2005. **Table 3.1-5** also shows for each city the air miles from Detroit, share of domestic passengers at DTW, and the average number of scheduled nonstop departures per day from DTW.

The top 20 cities accounted for a combined share of 69.2 percent of domestic O&D passengers at DTW. The top 20 cities consist of six short-haul destinations (500 air miles or less from DTW), six medium-haul destinations (greater than 500 air miles to 1,000 air miles from DTW), and eight long-haul destinations (greater than 1,000 air miles from DTW). At the top of the list is the New York-New Jersey area with 7.4 percent share of O&D passengers, followed by Chicago with 6.4 percent and the Los Angeles area with 5.3 percent.

Exhibit 3.1-15 Share of Domestic Originating Enplanements by Airline, CY 2000 and CY 2005



Source: BACK Aviation Solutions/U.S. Department of Transportation OD1A database.

Table 3.1-5 Top Twenty O&D Markets from DTW, CY 2005

Rank	City	Air Miles from DTW	Share of DTW O&D Enplanements	Primary Carrier	Market Share	Secondary Carrier	Market Share
1	New York, NY ^a	480	7.4%	Northwest	60.7%	Spirit	18.1%
2	Chicago, IL ^b	237	6.4%	Northwest	44.5%	Southwest	21.7%
3	Los Angeles, CA ^c	1,989	5.3%	Northwest	57.8%	Spirit	12.1%
4	Washington, D.C. ^d	395	5.2%	Northwest	69.0%	Spirit	7.5%
5	Las Vegas, NV	1,760	5.0%	Northwest	56.6%	US Airways	19.6%
6	Orlando, FL	957	5.0%	Northwest	61.3%	Spirit	26.5%
7	Florida South, FL ^e	1,152	4.3%	Northwest	53.1%	Spirit	27.7%
8	Phoenix, AZ	1,684	3.7%	Northwest	48.5%	US Airways	23.0%
9	Atlanta, GA	604	3.3%	Delta	46.6%	Northwest	44.4%
10	Tampa, FL	992	3.2%	Northwest	52.9%	Spirit	34.2%
11	Fort Myers, FL	1,089	2.8%	Northwest	41.6%	Spirit	41.4%
12	San Francisco, CA ^f	2,088	2.6%	Northwest	46.5%	United	12.8%
13	Dallas, TX ^g	998	2.1%	American	55.0%	Northwest	35.7%
14	St. Louis, MO	453	2.1%	Northwest	51.9%	Southwest	39.6%
15	Philadelphia, PA	440	1.9%	Northwest	60.1%	US Airways	28.1%
16	Denver, CO	1,134	1.9%	Northwest	54.2%	United	24.1%
17	Minneapolis, St. Paul, MN	537	1.8%	Northwest	85.6%	United	4.4%
18	Houston, TX ^h	1,109	1.8%	Continental	46.4%	Northwest	33.1%
19	Boston, MA	614	1.7%	Northwest	87.0%	US Airways	3.9%
20	Nashville, TN	470	1.7%	Northwest	64.8%	Southwest	30.0%
	Top 20 Markets		69.2%				
	Other Cities		30.8%				
	All Cities		100.0%				

^a Includes John F. Kennedy International Airport (JFK), LaGuardia Airport (LGA), and Newark Liberty International Airport (EWR).

^b Includes Chicago O'Hare International Airport (ORD) and Chicago Midway International Airport (MDW).

^c Includes Los Angeles International Airport (LAX), Bob Hope Airport (BUR), Ontario International Airport (ONT), John Wayne Airport (SNA), and Long Beach Municipal Airport (LGB).

^d Includes Washington Dulles International Airport (IAD), Washington National Airport (DCA) and Baltimore/Washington International Airport (BWI).

^e Includes Fort Lauderdale International Airport (FLL) and Miami International Airport (MIA).

^f Includes San Francisco International Airport (SFO), Oakland International Airport (OAK) and San Jose International Airport (SJC).

^g Includes Dallas-Fort Worth Airport (DFW) and Dallas Love Field Airport (DAL).

^h Includes George Bush Intercontinental/Houston (IAH) and William P. Hobby Airport (HOU).

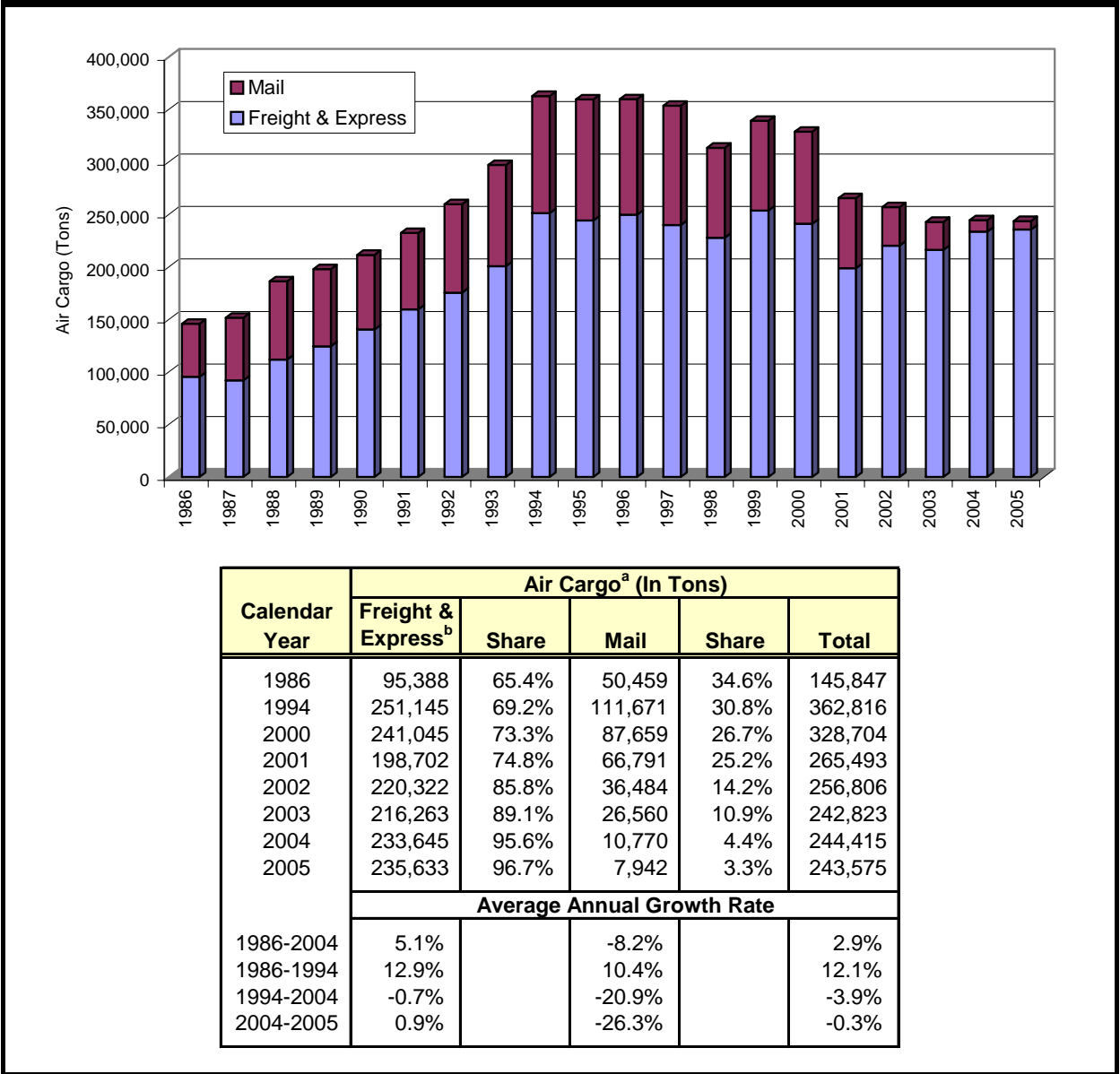
Source: BACK Aviation Solutions/U.S. Department of Transportation OD1A data.

3.1.11 Air Cargo

Exhibit 3.1-16 shows historical trends in air cargo at the Airport. Air cargo consists of freight and express (including small packages) and mail. Air cargo increased rapidly between 1986 and 1994 – from 145,847 tons to a peak of 362,816 tons. Thereafter air cargo began to decrease, leveling off at approximately 240,000 tons since 2003. On average, air cargo increased 12.1 percent annually between 1986 and 1994, and decreased 3.9 percent between 1994 and 2004, representing an average annual growth rate of 2.9 percent between 1986 and 2004. In 2005, air cargo decreased 0.3 percent.

Freight and express accounted for the predominant share of air cargo and increased from a share of 65.4 percent in 1986 to a share of 96.7 percent in 2005. Mail, on the other hand, decreased in share from 34.6 percent in 1986 to 3.3 percent in 2005. The US Postal Service (USPS) no longer flies mail to destinations within 800 miles; therefore, the volume of air mail is not expected to return to previous levels. After the September 11, 2001, events, the USPS also began shifting mail from belly carriers to all-cargo carriers, and all-cargo carriers report mail as part of total freight and express.

Exhibit 3.1-16 Air Cargo at DTW, CY 1986-2005

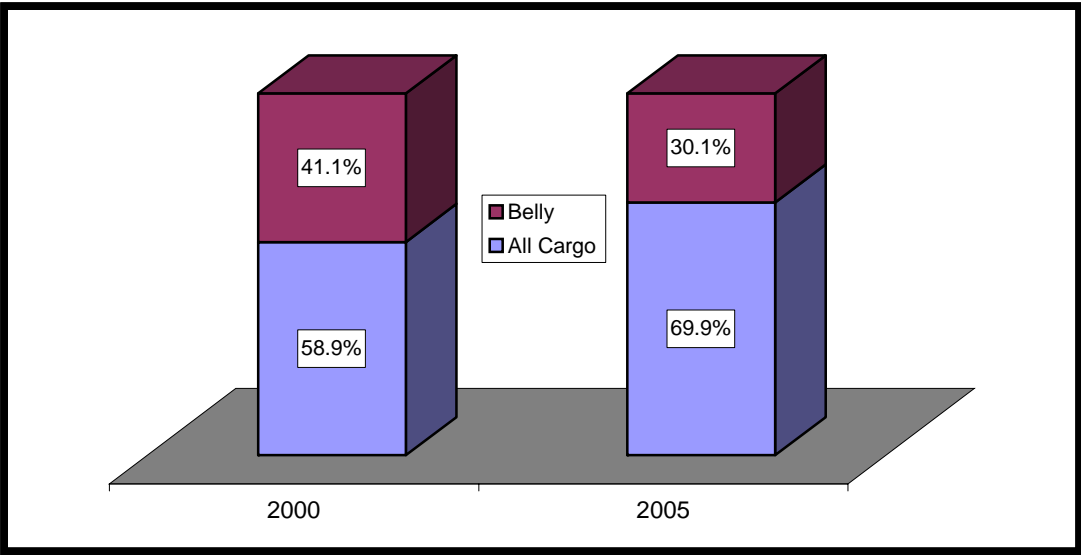


Notes:
^a Air cargo includes enplaned and deplaned freight & express and mail.
^b Freight & express includes small packages.

Source: Wayne County Airport Authority records.

Exhibit 3.1-17 shows the distribution of enplaned freight and express cargo between all-cargo and belly carriers. All-cargo carriers accounted for the majority share, and their share increased from 58.9 percent in 2000 to 69.9 percent in 2005. Belly carriers accounted for the remaining share of 41.1 percent in 2000 and 30.1 percent in 2005.

Exhibit 3.1-17 Distribution of Enplaned Freight and Express Cargo Between All-Cargo and Belly Carriers, CY 2000 and 2005



Source: Wayne County Airport Authority records.

3.1.12 Aircraft Operations

Exhibit 3.1-18 shows aircraft operations at DTW from FY 1984 through FY 2005, based on the FAA Air Traffic Control Tower records as reported in the TAF. Aircraft operations include both arrivals and departures. Annual aircraft operations increased from 316,000 in FY 1984 to 514,000 in FY 2004 at an average annual rate of 2.5 percent. Aircraft operations grew faster between FY 1984 and FY 1994, at an average annual rate of 4.3 percent, than they did between FY 1994 and FY 2004, at an average annual rate of 0.7 percent. In FY 2005, total aircraft operations were estimated to increase 3.5 percent to 532,000.

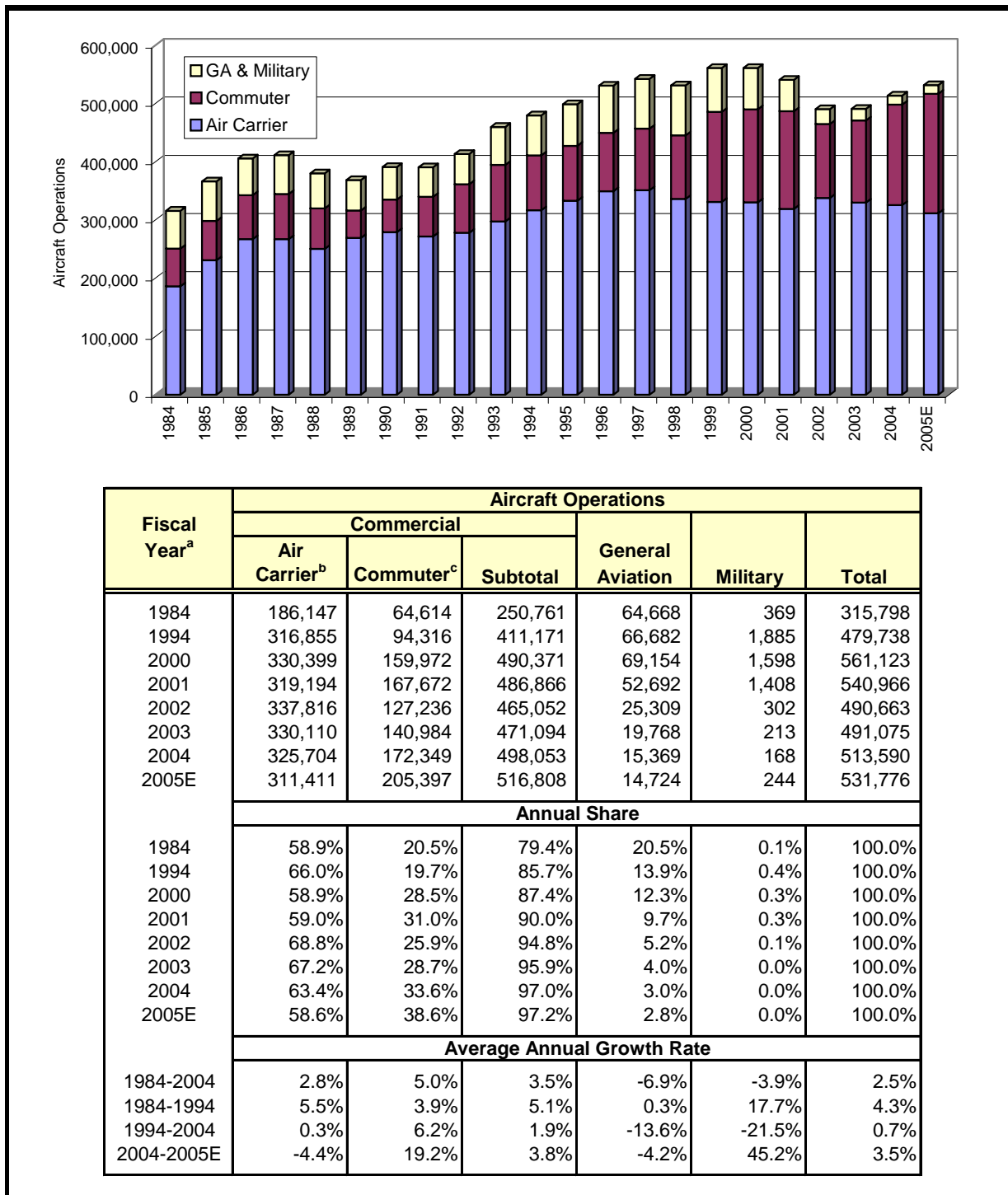
Commercial aircraft operations accounted for the large majority share of approximately 97.2 percent of total aircraft operations in FY 2005, up from a share of 79.4 percent in FY 1984. Commercial aircraft operations increased from 251,000 in FY 1984 to 498,000 in FY 2004 at an average annual rate of 3.5 percent. Annual growth moderated from an average of 5.1 percent between FY 1984 and FY 1994 to 1.9 percent between FY 1994 and FY 2004. In FY 2005, commercial aircraft operations were estimated at 517,000, an increase of 3.8 percent from FY 2004. Commercial operations are distributed between operations by aircraft with more than 60 seats (air carrier) and aircraft with 60 seats or less (commuter). Air carriers accounted for the majority share of total operations. Air carrier operations, however, declined in share of total operations (from a peak of 73.0 percent in FY 1989 to 58.6 percent in FY 2005) and number (from a peak of 351,000 in FY 1997 to 311,000 in FY 2005). In contrast, commuter operations increased significantly both in share of total operations

(from a low of 12.8 percent in FY 1989 to 38.6 percent in FY 2005) and number (from a low of 47,000 in FY 1989 to 205,000 in FY 2005).

Non-commercial operations consist of general aviation and military operations. Annual general aviation operations ranged between 49,000 to 84,000 during the period 1984-2001 and then suffered a significant decline to a range of approximately 15,000 to 25,000 during the last three years. General aviation's share of total operations decreased from 20.5 percent in 1984 to a mere 2.8 percent in 2005. General aviation activity at an airport tends to decline with the expansion of commercial activity, as general aviation activity is diverted to nearby reliever airports. In the Detroit CMSA, the following airports serve as general aviation relievers: Willow Run Airport, Coleman A. Young International Airport, Bishop International Airport and Oakland County International Airport. **Exhibit 3.1-19** shows the historical trends in general aviation operations at DTW and these four airports from FY 1984 through FY 2004, and estimates for FY 2005. General aviation operations declined in all but one airport (Bishop International), and the rate of decline was greatest at DTW. DTW held the smallest share of total general aviation operations in the five airports, and this share decreased from 9.4 percent in FY 1984 to 2.9 percent in FY 2004.

Military operations at DTW were very few – less than one percent of total operations. At their peak in 1993 there were only 2,157 military operations at DTW, and they declined to a few hundred per year during the past four years.

Exhibit 3.1-18 Aircraft Operations at DTW, FY 1984-2005



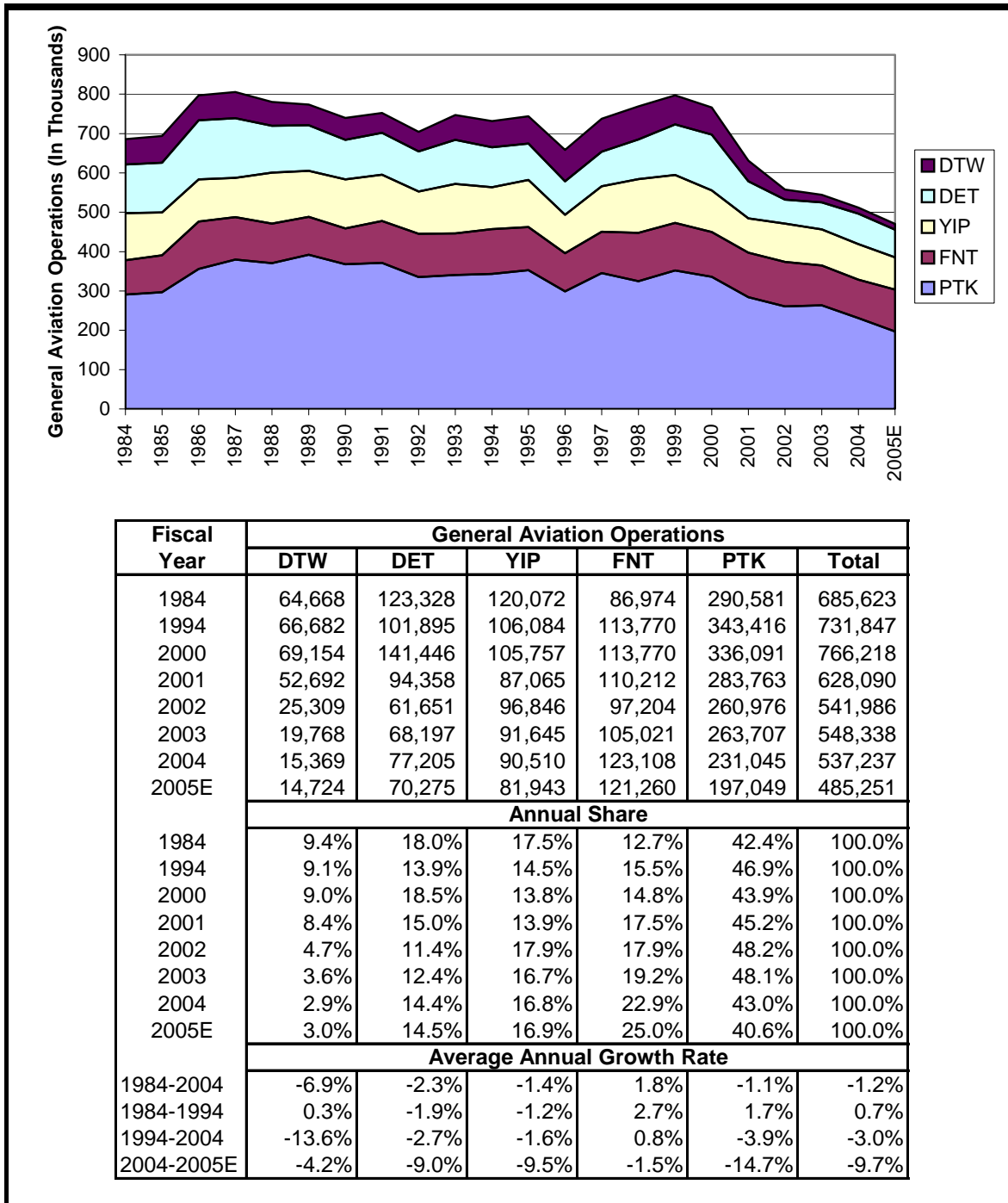
Notes:

^a The federal fiscal year runs from October 1 through September 30.

^b By FAA classification, air carriers operate aircraft with 60 seats or more, and commuters operate aircraft with less than 60 seats.

Source: Federal Aviation Administration, Terminal Area Forecasts, FY 2005-2025, February 2006.

Exhibit 3.1-19 General Aviation Operations at DTW and Nearby Reliever Airports, FY 1984-2005



DTW - Detroit Metropolitan Wayne County Airport
 DET - Coleman A. Young International Airport (formerly Detroit City Airport)
 YIP - Willow Run Airport
 FNT - Bishop International Airport
 PTK - Oakland County International Airport

Source: Federal Aviation Administration, *Terminal Area Forecasts*, February 2006.

3.1.13 Scheduled Commercial Passenger Aircraft Departures

Exhibit 3.1-20 shows scheduled commercial passenger aircraft departures at DTW from 1994 through 2005. Actual departures may differ slightly from scheduled departures due to flight cancellations, which are generally a small percentage of scheduled departures. The data for the period 2000 to 2005 show a decrease in air carrier aircraft departures and an increase in commuter aircraft departures.

3.1.14 Scheduled Commercial Passenger Aircraft Departures – Fleet Mix

Table 3.1-6 shows the percentage breakdown of scheduled passenger aircraft departures by class and type of aircraft at DTW in 1995, 2000 and 2005. **Table 3.1-6** also indicates the airlines that operated each aircraft type during those years. **Exhibit 3.1-21** shows the distribution of scheduled passenger departures by aircraft class in 1995 and 2005.

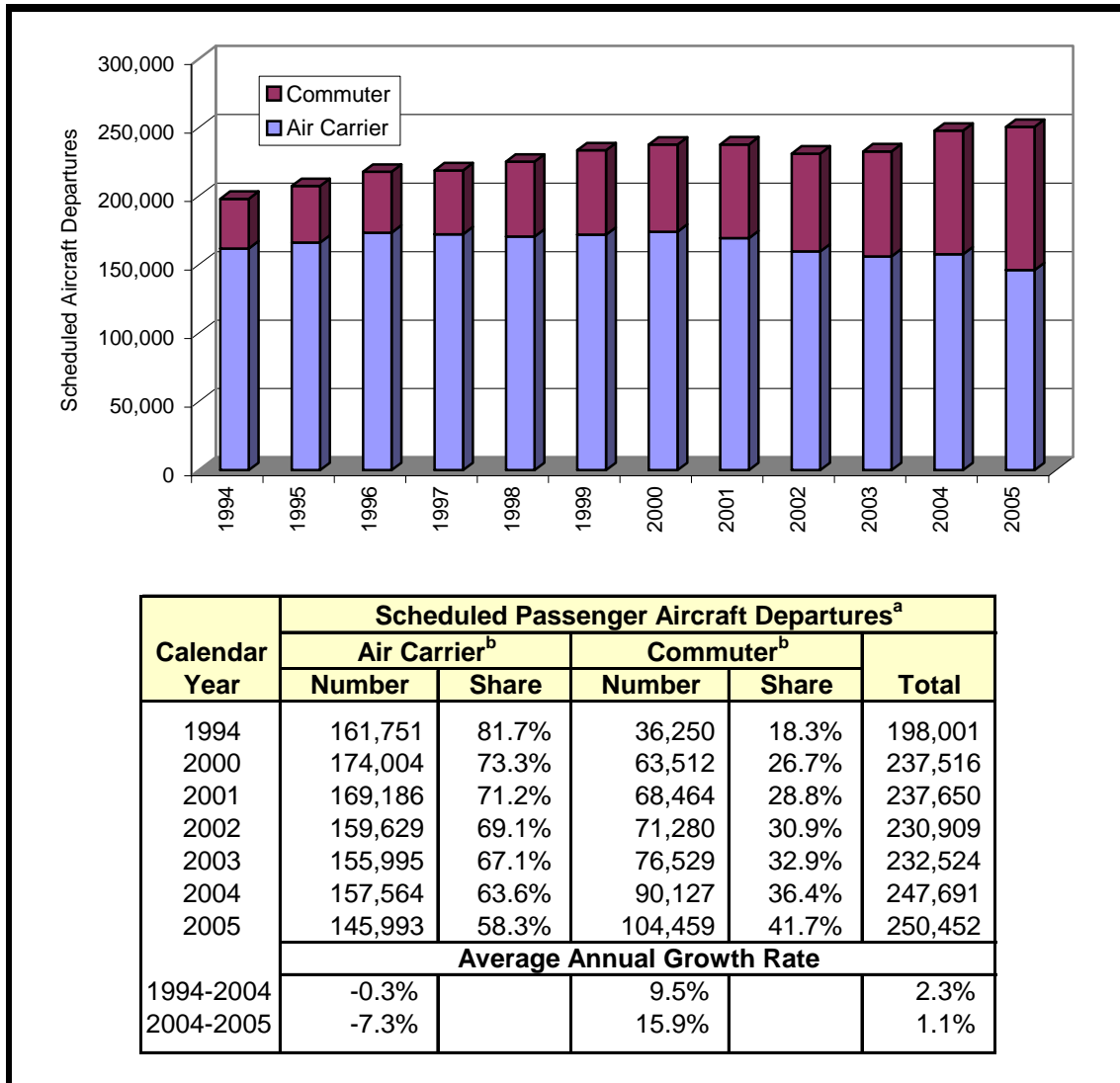
Narrowbody aircraft accounted for the majority share of departures; however, their share decreased from 73.1 percent in 1995 to 54.1 percent in 2005. Regional aircraft accounted for the second-largest share of 31.4 percent in 2005, up from less than one percent in 1995. Turboprop aircraft accounted for the third-largest share of 12.5 percent in 2005, down from 22.2 percent in 1995. Widebody aircraft accounted for the smallest share, which shrank from 4.0 percent in 1995 to 2.0 percent in 2005.

The changes in fleet mix at DTW are consistent with changes occurring industry-wide:

- Airlines have been phasing out turboprop aircraft and replacing them with newer and larger regional jets to provide better customer service.
- Airlines have been substituting regional jet aircraft for narrow body jet aircraft to match supply with demand more economically, while maintaining or increasing service frequency.
- Within the mainline fleet, the Forecast observed a similar change in fleet mix in favor of smaller, narrowbody aircraft particularly in serving domestic markets.

The above changes reflect industry efforts to streamline air service supply and reduce costs in response to declining yields and reduced demand during the 2001 recession and after the September 11, 2001, events.

Exhibit 3.1-20 Scheduled Passenger Aircraft Departures from DTW, CY 1994-2005



Notes:

^a These are scheduled aircraft departures from DTW as published in the OAG database.

^b By FAA classification, air carriers operate aircraft with 60 seats or more, and commuters operate aircraft with less than 60 seats.

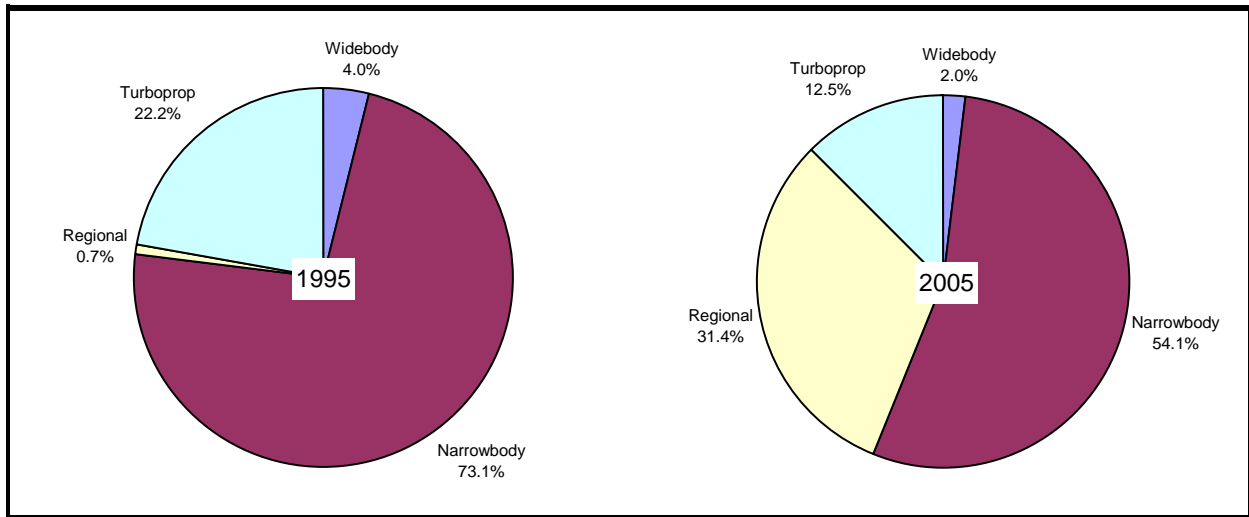
Source: BACK Aviation Solutions, Inc./OAG database.

Table 3.1-6 Scheduled Passenger Aircraft Fleet Mix at DTW, CY 1995, 2000 and 2005

Aircraft Class/Type	Seats	Share of Scheduled Passenger Aircraft Departures			Airlines
		1995	2000	2005	
Widebody					
B747	278-403	1.0%	1.1%	0.6%	BA, KL, LH, NW
DC10	273-360	2.4%	2.5%	0.2%	NW, SY, UA
MD11	282	0.05%			KL
A340	247-254		0.1%	0.01%	LH, RJ
A330	221-298			1.1%	AF, LH, NW
B777	227		0.01%	0.1%	BA
B767	189-210	0.5%	0.4%	0.0%	BA, DL, TR, UA
A310	175	0.0%			DL
Subtotal - Widebody		4.0%	4.2%	2.0%	
Narrowbody					
B757	182-224	6.7%	8.6%	6.8%	DL, HP, NW, UA
A321	169-198			0.5%	NK, US
B727	138-173	10.6%	5.2%	0.00%	AA, CO, DL, MG, NW, SY, TW, UA
A320	138-168	8.5%	7.5%	7.6%	HP, NW, UA, U5
MD80	133-150	2.4%	4.0%	3.7%	AA, CO, DL, NK, NW, TW, US
A319	120-132	0.0%	2.8%	9.0%	F9, HP, NK, NW, UA
B737	100-167	6.7%	6.1%	4.9%	AA, CO, DL, HP, N5, UA, US, WN
DC9	100-125	36.5%	31.7%	21.4%	CO, J7, NK, NW, TW, US
B717	111-117		0.00%	0.1%	FL, TW
A318	114			0.2%	F9
F100	87-97	1.4%	0.7%		AA, US
F28	68-75	0.3%	0.4%		A191, US
Subtotal - Narrowbody		73.1%	66.9%	54.1%	
Regional Jet					
BAe 146	100			0.1%	A221
ARJ70/85/100	69-82	0.3%	6.9%	4.9%	HQ, XJ
ER170	70			0.3%	A494, S5
CRJ700	64-70			0.6%	EV, OH, YV
CRJ	44-50	0.4%	1.3%	23.2%	9E, A221, A296, A454, EV, DH, OH, YV, ZW
ERJ145	50		0.3%	1.5%	9N, AX, A100, A136, CO, RP, YV
ERJ140	44			0.1%	A100
ERJ135	37			0.6%	A136
Subtotal - Regional Jet		0.7%	8.5%	31.4%	
Turboprop					
ATR	46		0.3%		A136
DH1/DH8	37	10.6%	0.3%	0.4%	A108, A109, A453, NW, QK, XJ
SF3	33-34	0.7%	18.7%	11.8%	A100, A108, HQ, OH, XJ
D38	31	0.0%	0.1%		A108
EM2	30	1.7%	0.2%		OH, A136
J41	28		0.5%		A199
BE1	19	1.1%	0.4%	0.3%	A134, A136, A171, K8
SWM	18-19	7.9%			A108, NW, XJ
J31	18	0.3%			A108
Subtotal - Turboprop		22.2%	20.5%	12.5%	
Total		100.0%	100.0%	100.0%	

Source: BACK Aviation Solutions/OAG Schedules and Lunkvist Fleet Databases.

Exhibit 3.1-21 Passenger Aircraft Fleet Mix at DTW, CY 1995 and 2005



Source: BACK Aviation Solutions/OAG Schedules and Lunkvist Fleet Databases.

3.2 Forecast Aviation Activity

This section presents alternative forecasts of aviation activity at DTW, namely:

- Terminal Area Forecasts
- Trendline Forecasts
- Multivariate Regression Forecasts
- Market Share Forecast

This section establishes the February 2006 TAF as the base forecast for the Airport Master Plan Study, given that the alternative forecasts all fall within 10 percent of the February 2006 TAF during the first five years of the forecast period and well within 15 percent of the February 2006 TAF during the first 10 years of the forecast period.

3.2.1 Alternative Forecasts of Aviation Activity

3.2.1.1 Terminal Area Forecast

The FAA develops Terminal Area Forecasts (TAF) for each airport annually for use in planning, budgeting and staffing. State aviation authorities also use the TAF as a basis for planning future airport improvements. The TAF contains forecasts of enplanements, aircraft operations, instrument operations and based aircraft.

The FAA develops the TAF using historical relationships between airport passenger demand and/or activity measures and local and national factors that influence aviation activity. In the case of DTW and the 34 other airports in the FAA Operational Evolution Plan (OEP), the FAA conducts a more in-depth analysis that considers the effect of local economic variables (such as income and employment), the growth of originating and connecting traffic and the price of air travel from a particular airport. The TAF also considers trends in seating capacity and load factors for commercial passenger service. In view of substantial changes in aviation activity in recent years, the FAA develops near-term forecasts for large hub airports using airport statistics to estimate baseline passenger levels, OAG schedules to project near-term departures and seats, and month-over-month trends in enplanements per departure to project near-term enplanement levels.

The TAF projects unconstrained demand for aviation services based upon prevailing conditions in the local economy, national economy and aviation industry. Constraints are considered to the extent that they are embodied in the historical trends and relationships used as bases for the forecast.⁵ This section presents the most recent TAF for DTW for FY 2005-2025 (February 2006 TAF) and the previous year's TAF (January 2005 TAF).

⁵ Federal Aviation Administration, *Terminal Area Forecast Summary*, March 2005.

3.2.1.2 Multivariate Regression Forecasts

Multivariate regression analysis provides a systematic framework for incorporating explanatory variables, quantifying economic relationships and generating forecasts. By design, multivariate regression analysis reduces subjective input and minimizes forecast errors.⁶

Using historical data from the TAF for the period 1984 through 2005, the Forecast estimated a multivariate regression model that relates annual enplanements to the following explanatory variables: (1) the price of air travel as measured by the real domestic passenger yield at DTW; (2) population in the 10-county Detroit CMSA; (3) non-farm employment in the Detroit CMSA; (4) real personal income per capita in the Detroit CMSA; and (5) structural changes in the travel market and airline industry since 2001. Each variable is described below:

- **Price of air travel.** The demand for air travel is inversely related to its price – the principle behind the downward sloping demand curve. Fewer people can afford to travel and do so less frequently when airfares go up. Conversely, more people can afford to travel and do so more frequently when airfares go down. Airfares have followed a long-term trend of decline since the 1978 industry deregulation, and declining airfares have contributed to the long-term growth in air travel. One important change in the market since the last recession is that business travel – previously price-inelastic relative to leisure travel – has also become sensitive to price. Shrinking corporate travel budgets during the recession prompted business travelers to become more price-conscious, and the Internet has made it easy to compare and find low airfares. Growing competition from low-cost carriers has prompted other airlines to simplify and lower airfares. In the regression model, the Forecast used the average domestic real passenger yield at DTW as a measure of the price of air travel. The Forecast contains historical data from the U.S. Department of Transportation OD1A database and projected future trends based on the FAA’s forecast of industry trends.⁷ The average domestic real passenger yield at DTW declined at an average annual rate of 2.9 percent from 1984 through 2005, and is projected to continue declining at an average annual rate of 0.9 percent through 2025 following forecast industry trends.
- **Local population.** The local population provides the local market for air travel services so that an increase in local population is expected to increase the demand for air travel at DTW. In the regression model, local population is represented by the population in the Detroit CMSA. The Forecast contains historical and forecast data on the local population from NPA Data Services, Inc., an independent regional data development and forecasting firm. The population in the Detroit CMSA grew by 0.4 percent annually from 1984 through 2005 and is projected to continue growing at an average of 0.4 percent annually through 2025.

⁶ Regression analysis is designed to find coefficients (the slopes and the intercept) that make the sum of the squared differences between the observed value and the predicted value of the dependent variable as small as possible – hence, the term “least squares” regression.

⁷ Federal Aviation Administration, *Aerospace Forecasts*, Fiscal Years 2005-2016, March 2005.

- **Local employment.** Local employment is an indicator of business activity and the state of the local economy. The Forecast anticipates the demand for air travel to increase with employment and business activity. The Forecast used non-farm employment in the Detroit CMSA to indicate local employment trends, and obtained historical and forecast data from NPA Data Services, Inc. Non-farm employment in the Detroit CMSA increased by an average of 1.3 percent annually from 1984 through 2005, and is projected to increase by an average of 0.7 percent annually from 2005 through 2025.
- **Local income.** The demand for air travel increases with income. Consumers tend to travel more when their incomes increase. Business activity increases, creating greater need for business travel. The Forecast used real personal income per capita in the Detroit CMSA as a measure of local income. The Forecast contains historical and forecast data from NPA Data Services, Inc. The real personal income per capita in the Detroit CMSA increased by an average of 2.0 percent annually from 1984 through 2005 and is projected to increase by an average of 1.6 percent annually from 2005 through 2025.
- **Structural changes since 2001.** A number of changes in the market and the industry have unfolded beginning in 2001, during the economic recession and following the September 11 terrorist attacks. For example, historically high-yield business travelers have become more price-sensitive as a result of reduced corporate travel budgets. Stricter security procedures at airports created longer lines, increasing the time cost of air travel and changing passenger travel propensities and choices. Airlines streamlined their schedules and restructured their services to enhance operating efficiency and cut costs, directly affecting air service at airports. At most airports, these changes have had a dampening effect on passenger traffic. In the regression model, the Forecast estimated the effects of these structural changes by including a *dummy variable*⁸ set equal to one from 2001 through the end of the forecast period – assuming that the effects of these structural changes are long-lasting – and zero otherwise.

The regression model, as specified above, represented the dynamics of the Detroit market very well. It yielded an *Adjusted R-squared*⁹ of 0.987, which means that the explanatory variables in the model jointly explain 98.7 percent of the historical variation in annual enplanements. This model was used to generate three sets of forecasts: One is unadjusted for any changes in scheduled seats in FY 2006 (Regression Model A), and the other two reflect adjustments for changes in scheduled seats in FY 2006 (Regression Models B and C). Airline schedules for FY 2006, published as of January 25, 2006, indicated a decrease of 10.4 percent in seats compared to FY 2005. Regression Model B assumes an improvement in boarding load factors so that enplanements in FY 2006 would decrease only five percent. Regression Model C assumes no improvement in boarding load factors so that enplanements in FY 2006 would decrease by as much as the 10 percent decrease in scheduled seats.

⁸ *Dummy variables*, also called *indicator variables*, are important econometric tools designed to represent dichotomous variables – variables that take the values zero and one. They are especially useful in indicating structural changes.

⁹ The *Adjusted R-squared*, called coefficient of determination, provides a measure of how well the regression model can predict the dependent variable, given only the independent variables included in the model.

3.2.1.3 Trendline Forecasts

Trendline forecasts were developed in two ways: (1) by estimating a simple regression model of enplanements as a linear function of time (Trendline Model A), and (2) by estimating a regression model of enplanements as a function of time and autoregressive factors that account for the correlation of enplanement levels over time¹⁰ (Trendline Model B). Historical annual enplanements were used from 1984 to 2005 to estimate the regression model. Historical data was used as reported in the TAF to ensure consistency and comparability with the TAF.

Trend extrapolation techniques assume that historical trends will be replicated in the future. The results may be flawed if future conditions deviate significantly from the past. Various factors influence passenger traffic trends, and the future trends of these factors may differ from historical trends. The composition of the Airport market could change as a result of changes in airline service, particularly changes in Northwest's hub operations at the Airport. Trend extrapolation techniques fail to show a causal relationship between aviation activity and factors that determine air travel demand, and cannot be used for performing sensitivity analysis with respect to changes in specific market factors. In the absence of a link between the forecast and explanatory variables, the uncertainty associated with the forecast tends to increase with time. At best, trend projections are useful in the short-term when the underlying explanatory factors are usually less dynamic.

3.2.1.4 Market Share Forecast

Market share models, also called ratio or top-down models, allocate aggregate activity – for example, national, state or regional – to the airport level. They are widely used for developing quick forecasts of airport activity, because national forecasts are readily available from the FAA annual publication, *Aerospace Forecasts*. To develop a forecast of total enplanements for DTW, the Forecast determined that DTW maintained an annual share of approximately 2.4 percent of total U.S. enplanements during 2003 and 2004. This annual share of total U.S. enplanements during 2003 and 2004 was applied to the annual enplanement forecasts developed by the FAA for the nation for the period FY 2006-2017. The results predict that enplanements at DTW would grow at 3.1 percent per year on average between FY 2005 and 2017.

Table 3.2-1 and **Exhibit 3.2-1** present the alternative forecasts of enplanements at DTW. The January 2005 TAF yields the highest enplanement forecast; the Regression Model C forecast yields the lowest enplanement forecast; and the February 2006 TAF falls in mid-range. **Table 3.2-2** shows that the alternative forecasts of enplanements are all within 10 percent of the February 2006 TAF during the first five years of the forecast period and well within 15 percent of the February 2006 TAF during the first 10 years of the forecast period.

Table 3.2-3 and **Exhibit 3.2-2** present alternative forecasts of commercial aircraft operations (air carrier and commuter). The forecast of commercial operations from the February 2006 TAF also falls in the middle of the range. The January 2005 TAF is the highest and the Regression Model C

¹⁰ Time series data often exhibit correlation over time (serial correlation). If uncorrected, the presence of serial correlation reduces the reliability of the coefficient estimates and standard error estimates in the regression. A simple way to correct for serial correlation is to add a variable (an autoregressive factor) to account for it in the regression model. Trendline Model B included autoregressive factors for first- and second-order serial correlation. (See Quantitative Micro Software, *EViews User's Guide*, pages 169-170.)

forecast is the lowest. **Table 3.2-4** shows that the alternative forecasts of commercial aircraft operations are within 10 percent of the February 2006 TAF during the first five years of the forecast period and well within 15 percent of the February 2006 TAF during the first 10 years of the forecast period.

For the purpose of this Master Plan Study, the Forecast used the February 2006 TAF as the base forecast, with the Regression Model C forecast providing a lower bound and the January 2005 TAF providing an upper bound of the forecast range of activity at DTW from FY 2006 through FY 2025. **Table 3.2-5** presents the forecasts of enplanements and commercial aircraft operations from these three forecasts, designated as base, low and high:

- Under the February 2006 TAF (base), annual enplanements are forecast to decrease 2.3 percent from 17.71 million in FY 2005 to 17.30 million in FY 2006, and then increase an average of 2.8 percent annually to 29.26 million in FY 2025. These trends represent an average annual growth rate in enplanements of 2.5 percent between 2005 and 2025. Commercial aircraft operations are forecast to decrease 2.1 percent from 516,808 in FY 2005 to 506,186 in FY 2006, and then increase to 791,300 in FY 2025, representing an average annual growth rate of 2.4 percent between 2005 and 2025.
- Using Regression Model C (low), annual enplanements are forecast to decrease 10.0 percent, from 17.71 million in FY 2005 to 15.94 million in FY 2006, given a 10.0 percent decrease in scheduled seats. Thereafter annual enplanements are forecast to increase an average of 2.2 percent to 24.32 million in FY 2025. These trends represent an average annual growth rate in enplanements of 1.6 percent between 2005 and 2025. Commercial aircraft operations are forecast to decrease 9.8 percent from 516,808 in FY 2005 to 466,366 in FY 2006, and then increase an average of 1.8 percent annually to 657,667 in FY 2025. These trends represent an average annual growth rate in commercial aircraft operations of 1.2 percent between 2005 and 2025.
- Under the January 2005 TAF (high), annual enplanements are forecast to increase steadily from 17.46 million in FY 2005 to 34.24 million in FY 2025 at an average rate of 3.4 percent. Annual commercial aircraft operations are forecast to increase from 526,883 in FY 2005 to 895,374 in FY 2025 at an average rate of 2.7 percent.

3.2.2 February 2006 Terminal Area Forecast

Table 3.2-6 presents the details of the February 2006 TAF, the base forecast for this Master Plan Study. The TAF provides forecasts of enplanements, allocated between air carriers and commuters. It presents forecasts of aircraft operations, broken down into itinerant and local operations. Itinerant operations consist of air carrier, commuter, general aviation and military operations. Local operations consist of general aviation and military operations. The TAF also provides forecasts of instrument operations and number of based aircraft.

Table 3.2-1 Alternative Forecasts of Enplanements at DTW

Fiscal Year ^a	Terminal Area Forecasts ^b		Multivariate Regression Forecasts ^c			Trendline Forecasts ^d		Market Share Forecast ^e
	February 2006 (Base)	January 2005 (High)	Model A	Model B	Model C (Low)	Model A	Model B	
2004 Actual	16,691,646	16,666,705	16,691,646	16,691,646	16,691,646	16,691,646	16,691,646	16,691,646
2005 Estimate	17,710,570	17,455,600	17,710,570	17,710,570	17,710,570	17,710,570	17,710,570	17,710,570
2006	17,300,481	18,462,147	17,912,872	16,825,042	15,939,513	18,901,001	18,958,820	17,758,527
2007	18,194,106	19,355,225	18,724,739	17,587,605	16,661,941	19,425,233	19,480,531	18,441,916
2008	18,886,745	20,183,355	19,392,875	18,215,166	17,256,473	19,949,464	20,003,014	19,029,391
2009	19,605,800	20,985,363	20,014,585	18,799,120	17,809,692	20,473,695	20,526,724	19,655,232
2010	20,410,786	21,734,574	20,584,708	19,334,620	18,317,008	20,997,926	21,051,390	20,314,642
2011	20,894,724	22,496,596	21,077,352	19,797,346	18,755,380	21,522,157	21,576,439	20,993,236
2012	21,404,997	23,281,774	21,508,104	20,201,939	19,138,679	22,046,388	22,101,366	21,705,399
2013	21,928,264	24,082,734	21,968,755	20,634,615	19,548,582	22,570,620	22,625,930	22,436,746
2014	22,464,868	24,889,920	22,430,517	21,068,335	19,959,475	23,094,851	23,150,149	23,204,060
2015	23,015,164	25,673,613	22,912,188	21,520,754	20,388,083	23,619,082	23,674,183	23,995,353
2016	23,579,517	26,461,442	23,369,308	21,950,114	20,794,845	24,143,313	24,198,206	24,825,011
2017	24,158,303	27,273,021	23,791,187	22,346,373	21,170,248	24,667,544	24,722,326	25,695,433
2018	24,751,905	28,078,231	24,177,670	22,709,385	21,514,154	25,191,775	25,246,563	n.a.
2019	25,360,719	28,880,932	24,646,234	23,149,493	21,931,099	25,716,007	25,770,878	n.a.
2020	25,985,155	29,712,183	25,032,417	23,512,224	22,274,739	26,240,238	26,295,213	n.a.
2021	26,608,452	30,567,359	25,475,403	23,928,308	22,668,923	26,764,469	26,819,528	n.a.
2022	27,247,513	31,447,149	25,945,378	24,369,741	23,087,123	27,288,700	27,343,805	n.a.
2023	27,902,759	32,352,261	26,420,693	24,816,192	23,510,076	27,812,931	27,868,052	n.a.
2024	28,574,622	33,283,423	26,873,411	25,241,417	23,912,921	28,337,163	28,392,287	n.a.
2025	29,263,547	34,241,387	27,332,498	25,672,623	24,321,432	28,861,394	28,916,525	n.a.
Annual Growth Rate								
2006	-2.3%	5.8%	1.1%	-5.0%	-10.0%	6.7%	7.0%	0.3%
2007	5.2%	4.8%	4.5%	4.5%	4.5%	2.8%	2.8%	3.8%
2008	3.8%	4.3%	3.6%	3.6%	3.6%	2.7%	2.7%	3.2%
2009	3.8%	4.0%	3.2%	3.2%	3.2%	2.6%	2.6%	3.3%
2010	4.1%	3.6%	2.8%	2.8%	2.8%	2.6%	2.6%	3.4%
2011	2.4%	3.5%	2.4%	2.4%	2.4%	2.5%	2.5%	3.3%
2012	2.4%	3.5%	2.0%	2.0%	2.0%	2.4%	2.4%	3.4%
2013	2.4%	3.4%	2.1%	2.1%	2.1%	2.4%	2.4%	3.4%
2014	2.4%	3.4%	2.1%	2.1%	2.1%	2.3%	2.3%	3.4%
2015	2.4%	3.1%	2.1%	2.1%	2.1%	2.3%	2.3%	3.4%
2016	2.5%	3.1%	2.0%	2.0%	2.0%	2.2%	2.2%	3.5%
2017	2.5%	3.1%	1.8%	1.8%	1.8%	2.2%	2.2%	3.5%
2018	2.5%	3.0%	1.6%	1.6%	1.6%	2.1%	2.1%	n.a.
2019	2.5%	2.9%	1.9%	1.9%	1.9%	2.1%	2.1%	n.a.
2020	2.5%	2.9%	1.6%	1.6%	1.6%	2.0%	2.0%	n.a.
2021	2.4%	2.9%	1.8%	1.8%	1.8%	2.0%	2.0%	n.a.
2022	2.4%	2.9%	1.8%	1.8%	1.8%	2.0%	2.0%	n.a.
2023	2.4%	2.9%	1.8%	1.8%	1.8%	1.9%	1.9%	n.a.
2024	2.4%	2.9%	1.7%	1.7%	1.7%	1.9%	1.9%	n.a.
2025	2.4%	2.9%	1.7%	1.7%	1.7%	1.8%	1.8%	n.a.
Average Annual Growth Rate^f								
2005-2025	2.5%	3.4%	2.2%	1.9%	1.6%	2.5%	2.5%	n.a.

^a The fiscal year ends in September.

^b The FAA develops Terminal Area Forecast (TAF) for each airport annually for use in planning, budgeting and staffing. **Table 3.2-1** presents the most recent TAF for DTW (February 2006) and the previous year's TAF for DTW (January 2005).

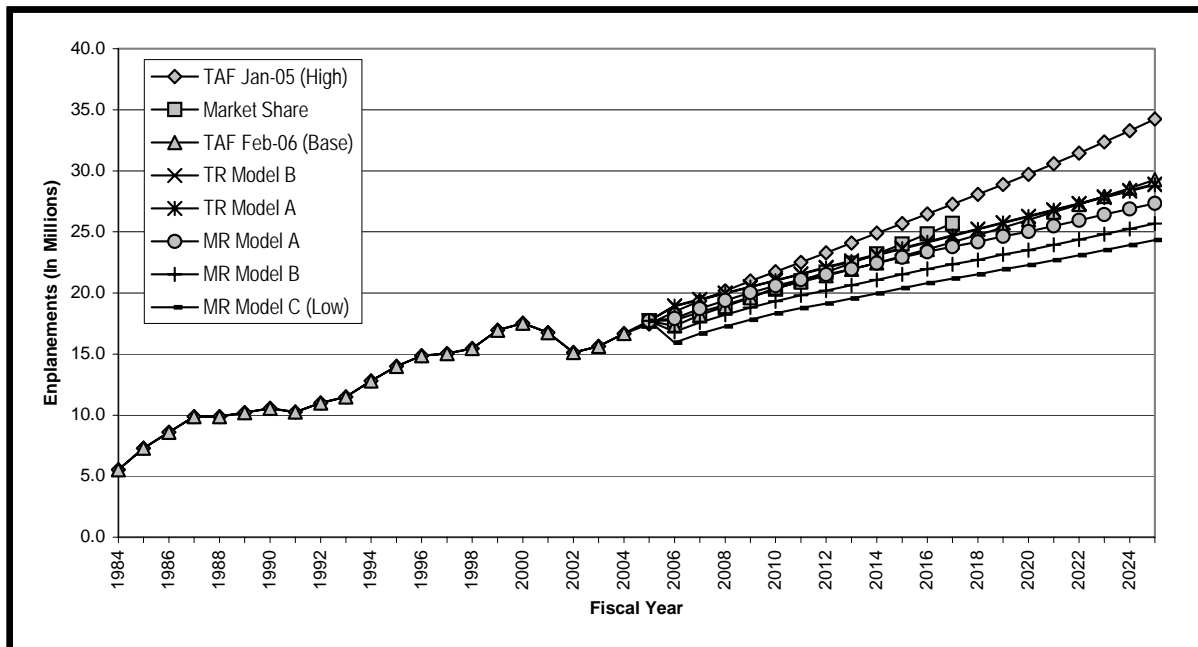
^c These forecasts were developed using a regression model of annual enplanements on the following explanatory variables: (1) real domestic passenger yield at DTW, (2) local population, (3) local non-farm employment, (4) real personal income per capita in the Detroit CMSA, and (5) structural changes since 2001. Model A presents the forecast results, unadjusted for the 10 percent decrease in scheduled seats at DTW in FY 2006. Model B assumes boarding load factors would increase in FY 2006 so that enplanements in FY 2006 would decrease only five percent with a 10 percent decrease in scheduled seats. Model C assumes no improvement in boarding load factors in FY 2006 so that enplanements in FY 2006 would decrease by 10 percent.

^d The trendline forecasts were developed by: (1) estimating a simple regression model of annual enplanements as a linear function of time (Model A), and (2) by estimating a regression model of enplanements as a function of time and autoregressive factors that account for serial correlation (Model B).

^e These represent the share of DTW of forecast U.S. enplanements in the FAA Aerospace Forecasts, FY 2006-2017, February 2006.

^f Compounded average annual growth rate.

Exhibit 3.2-1 Alternative Forecasts of Enplanements at DTW



Historical data, FY 1984-2004; estimate, FY 2005; forecast, FY 2006-2025.
 See **Table 3.2-1**.

Table 3.2-2 Percentage Differences of Alternative Enplanement Forecasts with respect to the February 2006 TAF

Fiscal Year	Terminal Area Forecasts		Multivariate Regression Forecasts			Trendline Forecasts		Market Share Forecast
	February 2006 (Base)	January 2005 (High)	Model A	Model B	Model C (Low)	Model A	Model B	
2004 Actual	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2005 Estimate	0.0%	-1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2006	0.0%	6.7%	3.5%	-2.7%	-7.9%	9.3%	9.6%	2.6%
2007	0.0%	6.4%	2.9%	-3.3%	-8.4%	6.8%	7.1%	1.4%
2008	0.0%	6.9%	2.7%	-3.6%	-8.6%	5.6%	5.9%	0.8%
2009	0.0%	7.0%	2.1%	-4.1%	-9.2%	4.4%	4.7%	0.3%
2010	0.0%	6.5%	0.9%	-5.3%	-10.3%	2.9%	3.1%	-0.5%
2011	0.0%	7.7%	0.9%	-5.3%	-10.2%	3.0%	3.3%	0.5%
2012	0.0%	8.8%	0.5%	-5.6%	-10.6%	3.0%	3.3%	1.4%
2013	0.0%	9.8%	0.2%	-5.9%	-10.9%	2.9%	3.2%	2.3%
2014	0.0%	10.8%	-0.2%	-6.2%	-11.2%	2.8%	3.1%	3.3%
2015	0.0%	11.6%	-0.4%	-6.5%	-11.4%	2.6%	2.9%	4.3%
2016	0.0%	12.2%	-0.9%	-6.9%	-11.8%	2.4%	2.6%	5.3%
2017	0.0%	12.9%	-1.5%	-7.5%	-12.4%	2.1%	2.3%	6.4%
2018	0.0%	13.4%	-2.3%	-8.3%	-13.1%	1.8%	2.0%	n.a
2019	0.0%	13.9%	-2.8%	-8.7%	-13.5%	1.4%	1.6%	n.a
2020	0.0%	14.3%	-3.7%	-9.5%	-14.3%	1.0%	1.2%	n.a
2021	0.0%	14.9%	-4.3%	-10.1%	-14.8%	0.6%	0.8%	n.a
2022	0.0%	15.4%	-4.8%	-10.6%	-15.3%	0.2%	0.4%	n.a
2023	0.0%	15.9%	-5.3%	-11.1%	-15.7%	-0.3%	-0.1%	n.a
2024	0.0%	16.5%	-6.0%	-11.7%	-16.3%	-0.8%	-0.6%	n.a
2025	0.0%	17.0%	-6.6%	-12.3%	-16.9%	-1.4%	-1.2%	n.a

See **Table 3.2-1**.

Table 3.2-3 Alternative Forecasts of Commercial Operations at DTW

Fiscal Year ^a	Terminal Area Forecasts ^b		Multivariate Regression Forecasts ^c			Trendline Forecasts ^d		Market Share Forecast ^e
	February 2006	January 2005	Model A	Model B	Model C	Model A	Model B	
2004 Actual	498,053	499,421	498,053	498,053	498,053	498,053	498,053	498,053
2005 Estimate	516,808	526,883	516,808	516,808	516,808	516,808	516,808	516,808
2006	506,186	556,077	524,104	492,275	466,366	553,015	554,706	519,588
2007	532,532	581,473	548,063	514,780	487,686	568,566	570,185	539,785
2008	552,302	604,589	567,103	532,663	504,628	583,379	584,945	556,473
2009	571,870	627,671	583,794	548,340	519,480	597,185	598,732	573,312
2010	591,486	649,002	596,526	560,300	530,810	608,501	610,050	588,700
2011	607,086	667,563	612,392	575,202	544,928	625,316	626,893	609,948
2012	618,639	685,373	621,619	583,869	553,139	637,176	638,765	627,321
2013	630,422	704,987	631,586	593,231	562,008	648,889	650,479	645,040
2014	642,435	721,945	641,453	602,498	570,787	660,451	662,032	663,574
2015	654,684	737,993	651,755	612,174	579,955	671,863	673,430	682,566
2016	667,174	753,491	661,226	621,071	588,383	683,126	684,680	702,415
2017	679,909	768,716	669,577	628,914	595,813	694,241	695,783	723,170
2018	692,897	784,601	676,822	635,719	602,260	705,211	706,744	n.a.
2019	706,145	800,061	686,251	644,576	610,650	716,038	717,565	n.a.
2020	719,652	815,211	693,266	651,165	616,893	726,716	728,239	n.a.
2021	733,425	830,648	702,194	659,551	624,837	737,725	739,243	n.a.
2022	747,470	846,377	711,749	668,525	633,340	748,600	750,112	n.a.
2023	761,793	862,404	721,330	677,524	641,865	759,341	760,845	n.a.
2024	776,401	878,735	730,177	685,834	649,738	769,949	771,447	n.a.
2025	791,300	895,374	739,084	694,200	657,663	780,426	781,916	n.a.
Annual Growth Rate								
2006	-2.1%	5.5%	1.4%	-4.7%	-9.8%	7.0%	7.3%	0.5%
2007	5.2%	4.6%	4.6%	4.6%	4.6%	2.8%	2.8%	3.9%
2008	3.7%	4.0%	3.5%	3.5%	3.5%	2.6%	2.6%	3.1%
2009	3.5%	3.8%	2.9%	2.9%	2.9%	2.4%	2.4%	3.0%
2010	3.4%	3.4%	2.2%	2.2%	2.2%	1.9%	1.9%	2.7%
2011	2.6%	2.9%	2.7%	2.7%	2.7%	2.8%	2.8%	3.6%
2012	1.9%	2.7%	1.5%	1.5%	1.5%	1.9%	1.9%	2.8%
2013	1.9%	2.9%	1.6%	1.6%	1.6%	1.8%	1.8%	2.8%
2014	1.9%	2.4%	1.6%	1.6%	1.6%	1.8%	1.8%	2.9%
2015	1.9%	2.2%	1.6%	1.6%	1.6%	1.7%	1.7%	2.9%
2016	1.9%	2.1%	1.5%	1.5%	1.5%	1.7%	1.7%	2.9%
2017	1.9%	2.0%	1.3%	1.3%	1.3%	1.6%	1.6%	3.0%
2018	1.9%	2.1%	1.1%	1.1%	1.1%	1.6%	1.6%	n.a.
2019	1.9%	2.0%	1.4%	1.4%	1.4%	1.5%	1.5%	n.a.
2020	1.9%	1.9%	1.0%	1.0%	1.0%	1.5%	1.5%	n.a.
2021	1.9%	1.9%	1.3%	1.3%	1.3%	1.5%	1.5%	n.a.
2022	1.9%	1.9%	1.4%	1.4%	1.4%	1.5%	1.5%	n.a.
2023	1.9%	1.9%	1.3%	1.3%	1.3%	1.4%	1.4%	n.a.
2024	1.9%	1.9%	1.2%	1.2%	1.2%	1.4%	1.4%	n.a.
2025	1.9%	1.9%	1.2%	1.2%	1.2%	1.4%	1.4%	n.a.
Average Annual Growth Rate								
2005-2025	2.2%	2.7%	1.8%	1.5%	1.2%	2.1%	2.1%	n.a.

^a The fiscal year ends in September.

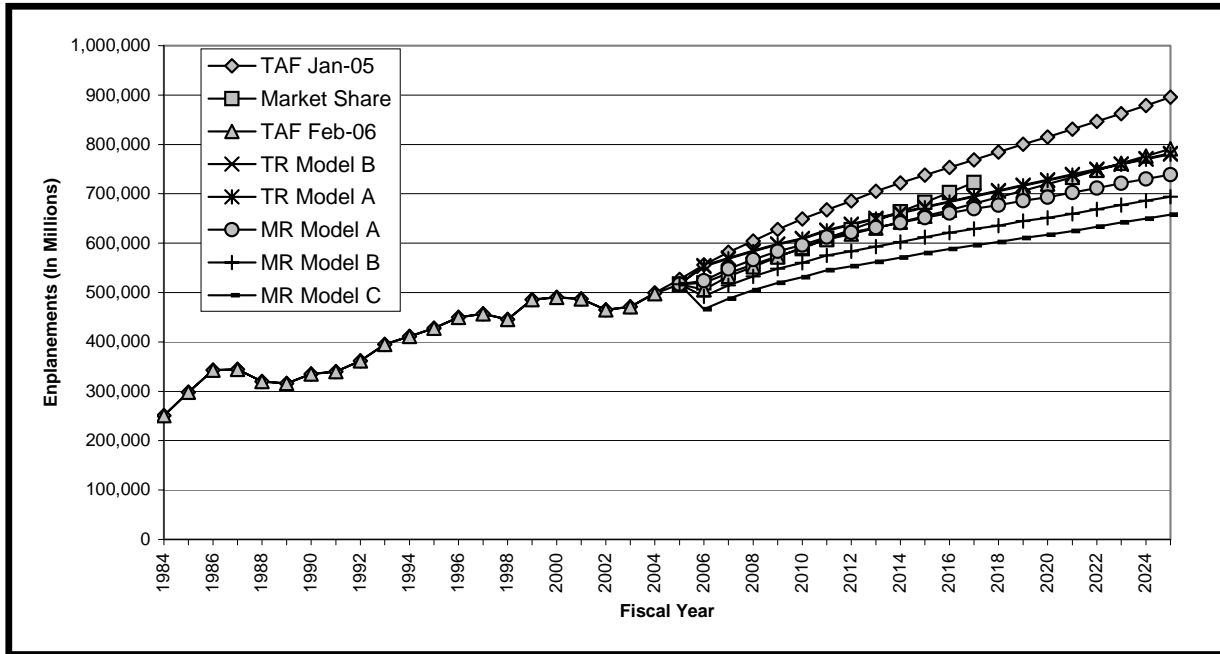
^b The FAA develops Terminal Area Forecast (TAF) for each airport annually for use in planning, budgeting and staffing. **Table 3.2-1** presents the most recent TAF for DTW (February 2006) and the previous year's TAF for DTW (February 2005).

^c These forecasts were developed using a regression model of annual enplanements on the following explanatory variables: (1) real domestic passenger yield at DTW, (2) local population, (3) local non-farm employment, (4) real personal income per capita in the Detroit CMSA, and (5) structural changes since 2001. Model A presents the forecast results, unadjusted for the 10 percent decrease in scheduled seats at DTW in FY 2006. Model B assumes boarding load factors would increase in FY 2006 so that enplanements in FY 2006 would decrease only five percent with a 10 percent decrease in scheduled seats. Model C assumes no improvement in boarding load factors in FY 2006 so that enplanements in FY 2006 would decrease by 10 percent, as much as the decrease in scheduled seats.

^d The trendline forecasts were developed by: (1) estimating a simple regression model of annual enplanements as a linear function of time (Model A), and (2) by estimating a regression model of enplanements as a function of time and autoregressive factors that account for serial correlation (Model B).

^e The market share forecasts were developed by calculating the share of DTW of forecast U.S. enplanements in the FAA Aerospace Forecasts, Fiscal Years 2006-2017, February 2006.

Exhibit 3.2-2 Alternative Forecasts of Commercial Operations at DTW



See Table 3.2-3.

Table 3.2-4 Percentage Differences of Alternative Forecasts of Commercial Operations with respect to the February 2006 TAF

Fiscal Year ^a	Terminal Area Forecasts ^b		Multivariate Regression Forecasts ^c			Trendline Forecasts ^d		Market Share Forecast ^e
	February 2006	January 2005	Model A	Model B	Model C	Model A	Model B	
2004 Actual	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2005 Estimate	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2006	0.0%	9.9%	3.5%	-2.7%	-7.9%	9.3%	9.6%	2.6%
2007	0.0%	9.2%	2.9%	-3.3%	-8.4%	6.8%	7.1%	1.4%
2008	0.0%	9.5%	2.7%	-3.6%	-8.6%	5.6%	5.9%	0.8%
2009	0.0%	9.8%	2.1%	-4.1%	-9.2%	4.4%	4.7%	0.3%
2010	0.0%	9.7%	0.9%	-5.3%	-10.3%	2.9%	3.1%	-0.5%
2011	0.0%	10.0%	0.9%	-5.3%	-10.2%	3.0%	3.3%	0.5%
2012	0.0%	10.8%	0.5%	-5.6%	-10.6%	3.0%	3.3%	1.4%
2013	0.0%	11.8%	0.2%	-5.9%	-10.9%	2.9%	3.2%	2.3%
2014	0.0%	12.4%	-0.2%	-6.2%	-11.2%	2.8%	3.1%	3.3%
2015	0.0%	12.7%	-0.4%	-6.5%	-11.4%	2.6%	2.9%	4.3%
2016	0.0%	12.9%	-0.9%	-6.9%	-11.8%	2.4%	2.6%	5.3%
2017	0.0%	13.1%	-1.5%	-7.5%	-12.4%	2.1%	2.3%	6.4%
2018	0.0%	13.2%	-2.3%	-8.3%	-13.1%	1.8%	2.0%	n.a.
2019	0.0%	13.3%	-2.8%	-8.7%	-13.5%	1.4%	1.6%	n.a.
2020	0.0%	13.3%	-3.7%	-9.5%	-14.3%	1.0%	1.2%	n.a.
2021	0.0%	13.3%	-4.3%	-10.1%	-14.8%	0.6%	0.8%	n.a.
2022	0.0%	13.2%	-4.8%	-10.6%	-15.3%	0.2%	0.4%	n.a.
2023	0.0%	13.2%	-5.3%	-11.1%	-15.7%	-0.3%	-0.1%	n.a.
2024	0.0%	13.2%	-6.0%	-11.7%	-16.3%	-0.8%	-0.6%	n.a.
2025	0.0%	13.2%	-6.6%	-12.3%	-16.9%	-1.4%	-1.2%	n.a.

See Table 3.2-3.

Table 3.2-5 Base, Low, and High Forecasts of Aviation Activity at DTW

Fiscal Year ^a	Base		Low		High	
	TAF February 2006 ^b		Regression Model C ^c		TAF January 2005 ^d	
	Enplanements	Commercial Operations	Enplanements	Commercial Operations	Enplanements	Commercial Operations
2004 Actual	16,691,646	498,053	16,691,646	498,053	16,666,705	499,421
2005 Estimate	17,710,570	516,808	17,710,570	516,808	17,455,600	526,883
2006	17,300,481	506,186	15,939,513	466,366	18,462,147	556,077
2007	18,194,106	532,532	16,661,941	487,686	19,355,225	581,473
2008	18,886,745	552,302	17,256,473	504,628	20,183,355	604,589
2009	19,605,800	571,870	17,809,692	519,480	20,985,363	627,671
2010	20,410,786	591,486	18,317,008	530,810	21,734,574	649,002
2011	20,894,724	607,086	18,755,380	544,928	22,496,596	667,563
2012	21,404,997	618,639	19,138,679	553,139	23,281,774	685,373
2013	21,928,264	630,422	19,548,582	562,008	24,082,734	704,987
2014	22,464,868	642,435	19,959,475	570,787	24,889,920	721,945
2015	23,015,164	654,684	20,388,083	579,955	25,673,613	737,993
2016	23,579,517	667,174	20,794,845	588,383	26,461,442	753,491
2017	24,158,303	679,909	21,170,248	595,813	27,273,021	768,716
2018	24,751,905	692,897	21,514,154	602,260	28,078,231	784,601
2019	25,360,719	706,145	21,931,099	610,650	28,880,932	800,061
2020	25,985,155	719,652	22,274,739	616,893	29,712,183	815,211
2021	26,608,452	733,425	22,668,923	624,837	30,567,359	830,648
2022	27,247,513	747,470	23,087,123	633,340	31,447,149	846,377
2023	27,902,759	761,793	23,510,076	641,865	32,352,261	862,404
2024	28,574,622	776,401	23,912,921	649,738	33,283,423	878,735
2025	29,263,547	791,300	24,321,432	657,663	34,241,387	895,374
Average Annual Growth Rate						
2005-2025	2.5%	2.2%	1.6%	1.2%	3.4%	2.7%

^a The fiscal year ends in September.

^b Federal Aviation Administration, Terminal Area Forecast, February 2006. See **Table 3.2-1** and **Table 3.2-3**.

^c These forecasts were developed using a regression model of annual enplanements on the following explanatory variables: (1) real domestic passenger yield at DTW, (2) local population, (3) local non-farm employment, (4) real personal income per capita in the Detroit CMSA, and (5) structural changes since 2001. In Model C, we assume that enplanements in FY 2006 would decrease by 10 percent, as much as the decrease in scheduled seats in FY 2006. Beginning in FY 2007, annual enplanements are forecast to grow at annual rates predicted by the regression model. See **Table 3.2-1** and **Table 3.2-3**.

^d Federal Aviation Administration, Terminal Area Forecast, January 2005. See **Table 3.2-1** and **Table 3.2-3**.

Table 3.2-6 Terminal Area Forecast for DTW, February 2006

Fiscal Year ^a	Aircraft Operations														Based Aircraft
	Enplanements			Itinerant Operations					Local Operations			Total OPS	Total Instrument Operations		
	Air Carriers ^b	Commuters ^c	Total	Air Carriers ^b	Commuters ^c	GA	Military	Total	GA	Military	Total				
1984	5,288,406	237,868	5,526,274	186,147	64,614	64,668	369	315,798	0	0	0	315,798	315,875	160	
1985	7,051,642	233,533	7,285,175	230,759	67,514	67,673	315	366,261	0	0	0	366,261	366,637	160	
1986	8,208,345	396,149	8,604,494	267,375	75,366	62,874	320	405,935	0	0	0	405,935	406,767	160	
1987	9,526,895	348,188	9,875,083	267,067	9,875,083	66,663	335	411,628	0	0	0	411,628	411,790	160	
1988	9,540,058	335,246	9,875,304	250,445	69,470	59,939	307	380,161	0	0	0	380,161	390,304	160	
1989	9,972,081	236,076	10,208,157	269,199	47,176	52,312	210	368,897	0	0	0	368,897	401,162	160	
1990	10,234,625	317,428	10,552,053	279,148	56,001	55,796	220	391,165	0	0	0	391,165	391,165	132	
1991	9,866,262	375,441	10,241,703	271,720	68,429	50,147	567	390,863	0	0	0	390,863	390,863	132	
1992	10,537,443	446,143	10,983,586	277,880	83,788	49,804	2,072	413,544	0	0	0	413,544	418,912	132	
1993	10,963,807	532,702	11,496,509	297,422	97,419	63,011	2,157	460,009	0	0	0	460,009	460,009	132	
1994	12,226,791	574,685	12,801,476	316,855	94,316	66,682	1,885	479,738	0	0	0	479,738	481,049	71	
1995	13,372,191	618,111	13,990,302	333,002	94,644	69,721	1,520	498,887	0	0	0	498,887	501,399	86	
1996	14,173,861	692,990	14,866,851	349,630	100,370	79,532	1,566	531,098	0	0	0	531,098	531,486	86	
1997	14,406,083	622,270	15,028,353	351,053	106,019	84,000	1,554	542,626	0	0	0	542,626	542,647	86	
1998	14,443,962	1,012,621	15,456,583	336,457	108,989	84,199	1,689	531,334	0	0	0	531,334	531,688	86	
1999	15,421,802	1,540,301	16,962,103	331,153	154,790	73,667	1,685	561,295	0	0	0	561,295	561,518	86	
2000	15,972,159	1,548,647	17,520,806	330,399	159,972	68,982	1,598	560,951	172	0	172	561,123	561,139	86	
2001	15,120,684	1,645,848	16,766,532	319,194	167,672	51,618	1,405	539,889	1,074	3	1,077	540,966	542,632	71	
2002	13,343,991	1,774,130	15,118,121	337,816	127,236	19,282	302	484,636	6,027	0	6,027	490,663	483,839	40	
2003	13,488,572	2,141,291	15,629,863	330,110	140,984	16,285	213	487,592	3,483	0	3,483	491,075	487,789	37	
2004	14,198,954	2,492,692	16,691,646	325,704	172,349	14,894	168	513,115	475	0	475	513,590	572,551	34	
2005*	14,609,662	3,100,908	17,710,570	311,411	205,397	13,599	229	530,636	1,125	15	1,140	531,776	592,326	34	
2006*	13,908,088	3,392,393	17,300,481	288,055	218,131	13,812	229	520,227	1,125	15	1,140	521,367	579,498	32	
2007*	14,601,562	3,592,544	18,194,106	300,441	232,091	14,029	229	546,790	1,125	15	1,140	547,930	606,715	29	
2008*	15,164,871	3,721,874	18,886,745	311,857	240,445	14,249	229	566,780	1,125	15	1,140	567,920	627,799	29	
2009*	15,749,940	3,855,860	19,605,800	322,771	249,099	14,472	229	586,571	1,125	15	1,140	587,711	649,260	27	
2010*	16,390,346	4,020,440	20,410,786	333,421	258,065	14,699	229	606,414	1,125	15	1,140	607,554	671,078	27	
2011*	16,749,651	4,145,073	20,894,724	343,088	263,998	14,930	229	622,245	1,125	15	1,140	623,385	688,977	25	
2012*	17,131,428	4,273,569	21,404,997	348,570	270,069	15,164	229	634,032	1,125	15	1,140	635,172	702,897	25	
2013*	17,522,215	4,406,049	21,928,264	354,142	276,280	15,401	229	646,052	1,125	15	1,140	647,192	717,081	22	
2014*	17,922,231	4,542,637	22,464,868	359,802	282,633	15,643	229	658,307	1,125	15	1,140	659,447	731,492	22	
2015*	18,331,706	4,683,458	23,015,164	365,552	289,132	15,794	229	670,707	1,125	15	1,140	671,847	746,036	21	
2016*	18,750,873	4,828,644	23,579,517	371,394	295,780	15,947	229	683,350	1,125	15	1,140	684,490	760,768	21	
2017*	19,179,971	4,978,332	24,158,303	377,328	302,581	16,102	229	696,240	1,125	15	1,140	697,380	775,741	20	
2018*	19,619,245	5,132,660	24,751,905	383,358	309,539	16,258	229	709,384	1,125	15	1,140	710,524	791,026	19	
2019*	20,068,948	5,291,771	25,360,719	389,488	316,657	16,415	229	722,789	1,125	15	1,140	723,929	806,630	19	
2020*	20,529,340	5,455,815	25,985,155	395,713	323,939	16,574	229	736,455	1,125	15	1,140	737,595	822,559	18	
2021*	20,983,507	5,624,945	26,608,452	402,037	331,388	16,734	229	750,388	1,125	15	1,140	751,528	838,814	17	
2022*	21,448,195	5,799,318	27,247,513	408,462	339,008	16,896	229	764,595	1,125	15	1,140	765,735	855,410	17	
2023*	21,923,663	5,979,096	27,902,759	414,989	346,804	17,060	229	779,082	1,125	15	1,140	780,222	872,349	15	
2024*	22,410,174	6,164,448	28,574,622	421,622	354,779	17,225	229	793,855	1,125	15	1,140	794,995	889,645	15	
2025*	22,908,002	6,355,545	29,263,547	428,362	362,938	17,392	229	808,921	1,125	15	1,140	810,061	907,304	15	

^a The fiscal year ends in September. The figures for 1984-2004 represent actual historical data; the figures for 2005 represent an estimate; and the figures for 2006-2025 represent forecast.

^b This category includes both scheduled and unscheduled air carrier (60 seats or more) operations. Operations may include passenger or cargo aircraft.

^c This category includes both scheduled and unscheduled commuters and air taxi (less than 60 seats) operations. Operations may include passenger or cargo aircraft.

Source: Federal Aviation Administration, Terminal Area Forecast, February 2006.

3.2.2.1 Forecast Enplanements

Table 3.2-7 presents estimated enplanements in FY 2005 and forecast enplanements for the years 2010, 2015 and 2025. The February 2006 TAF provides a breakdown of enplanements between air carriers (aircraft with 60 seats or more) and commuters (aircraft with less than 60 seats). Table 3.2-7 allocates air carrier and commuter enplanements between domestic and international traffic, based on actual shares in FY 2005 and information on new service from published airline schedules in FY 2006. Exhibit 3.2-3 shows the trends in forecast air carrier and commuter enplanements. Exhibit 3.2-4 shows the trends in forecast domestic and international enplanements.

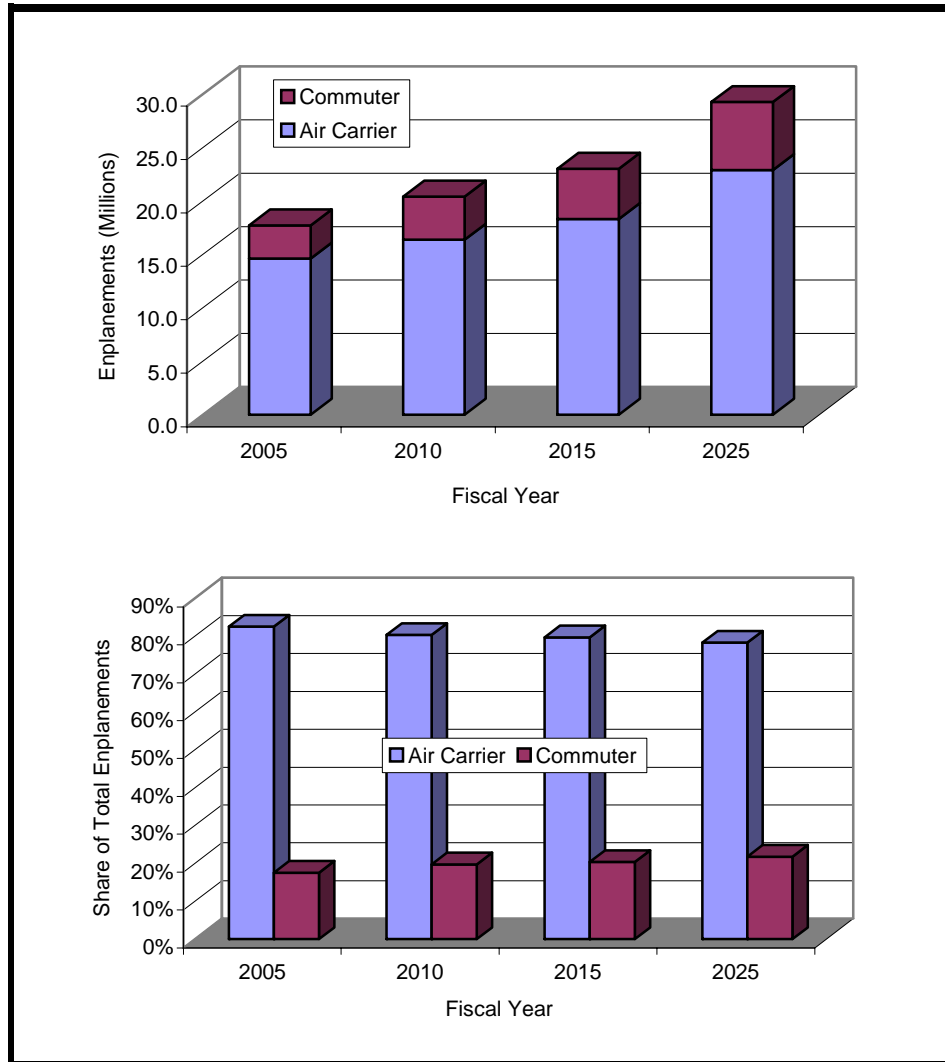
Table 3.2-7 Forecast Enplanements at DTW by Aircraft Type and Traffic Segment

Fiscal Year	Air Carrier			Commuter			Total		
	Domestic	International	Subtotal	Domestic	International	Subtotal	Domestic	International	Total
2005	13,178,672	1,430,990	14,609,662	3,064,932	35,976	3,100,908	16,243,604	1,466,966	17,710,570
2010	14,134,941	2,255,405	16,390,346	3,973,796	46,644	4,020,440	18,108,737	2,302,049	20,410,786
2015	15,888,801	2,442,905	18,331,706	4,629,122	54,336	4,683,458	20,517,923	2,497,241	23,015,164
2025	20,090,097	2,817,905	22,908,002	6,281,810	73,735	6,355,545	26,371,906	2,891,641	29,263,547
Average Annual Growth Rate									
2005-2025	2.1%	3.4%	2.3%	3.7%	3.7%	3.7%	2.5%	3.5%	2.5%
2005-2010	1.4%	9.5%	2.3%	5.3%	5.3%	5.3%	2.2%	9.4%	2.9%
2010-2015	2.4%	1.6%	2.3%	3.1%	3.1%	3.1%	2.5%	1.6%	2.4%
2015-2025	2.4%	1.4%	2.3%	3.1%	3.1%	3.1%	2.5%	1.5%	2.4%

The enplanement forecasts are as follows:

- Total enplanements are forecast to grow from 17.71 million in FY 2005 to 29.26 million in FY 2025 at an average annual rate of 2.5 percent. Growth in total enplanements is projected to occur at a higher average annual rate of 2.9 percent during the first five years of the forecast period, and then slow to an average annual rate of 2.4 percent over the next 15 years.
- Air carrier enplanements are forecast to grow from 14.61 million in FY 2005 to 22.91 million in FY 2025 at an average annual rate of 2.3 percent. As shown in Exhibit 3.2-3, air carriers will continue to account for the large majority of enplanements at DTW, but their share is projected to decrease from 82.5 percent in FY 2005 to 78.3 percent in FY 2025.
- Commuter enplanements are expected to continue growing at a faster rate than air carrier enplanements. They are forecast to grow from 3.10 million in FY 2005 to 6.36 million in FY 2025 at an average annual rate of 3.7 percent. The average annual growth of commuter enplanements, however, is projected to slow from 5.3 percent during the first five years of the forecast period to 3.1 percent during the next 15 years. Commuters are projected to increase their share of enplanements at DTW from 17.5 percent in FY 2005 to 21.7 percent in FY 2025.

Exhibit 3.2-3 Forecast Air Carrier and Commuter Enplanements at DTW

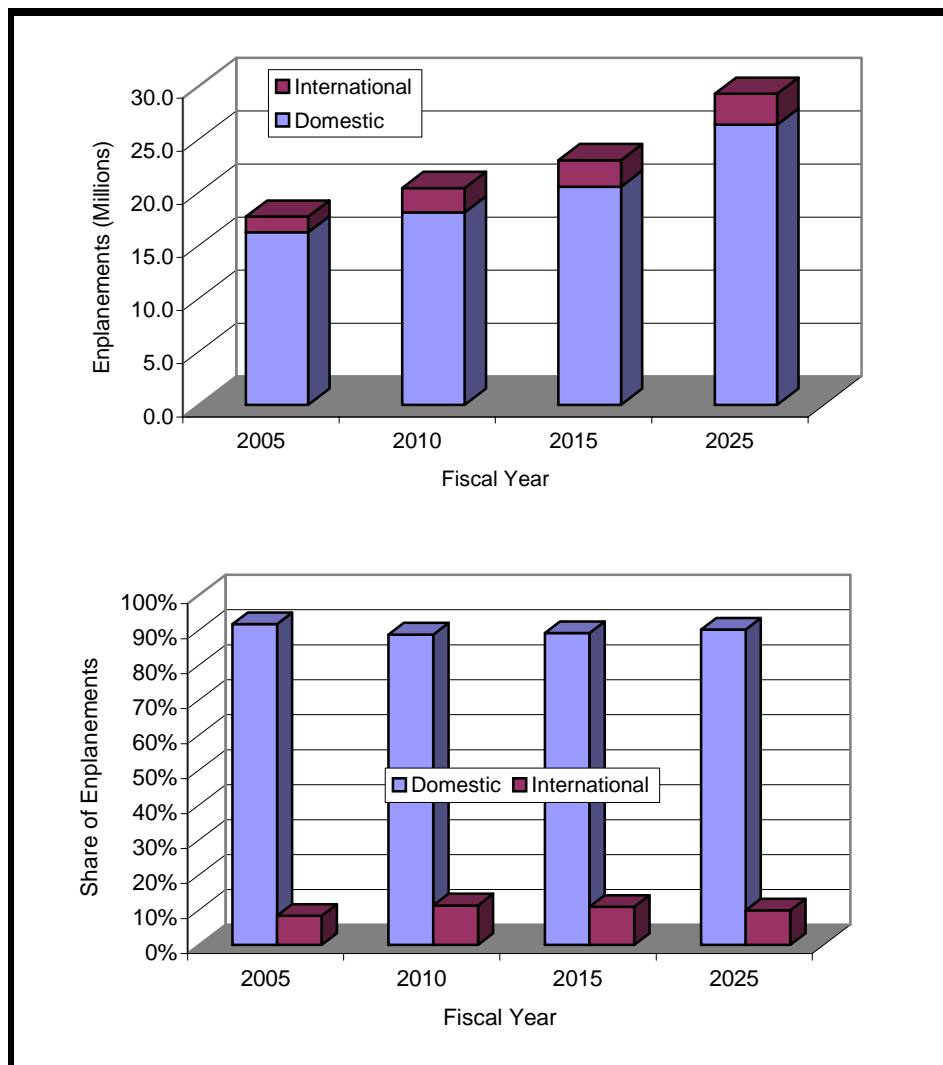


- Air carrier and commuter enplanements have been allocated between domestic and international traffic segments based on recent historical shares. Air carrier enplanements are distributed as follows: domestic, 90.2 percent; international, 9.8 percent. Commuter enplanements are distributed as follows: domestic, 98.8 percent; international, 1.2 percent.
- Domestic enplanements are forecast to increase from 16.24 million in FY 2005 to 26.37 million in FY 2025 at an average annual rate of 2.5 percent. International enplanements are forecast to increase from 1.47 million in FY 2005 to 2.89 million in FY 2025 at an average annual rate of 3.5 percent. The forecast of international enplanements anticipates an increase in international enplanements by Northwest of a total of approximately 650,000 over the period from FY 2006 through FY 2009 and an average of 37,500 beginning in FY 2011 and

every year thereafter, as a result of new international service planned by Northwest based on anticipated aircraft deliveries and business needs.¹¹

- As shown in **Exhibit 3.2-4**, the domestic share of total enplanements is projected to slightly decrease from 91.7 percent in FY 2005 to 90.1 percent in FY 2025, while the international share is projected to slightly increase from 8.3 percent in FY 2005 to 9.9 percent in FY 2025.

Exhibit 3.2-4 Forecast Domestic and International Enplanements at DTW



- **Table 3.2-8** allocates forecast enplanements between O&D and connecting traffic. **Exhibit 3.2-5** shows the forecast trends in O&D and connecting enplanements and relative shares. The Forecast used data from the U.S. Department of Transportation 10-percent ticket survey (BACK Aviation Solutions/OD1A database) and WCAA records of enplanements by airline to establish the distribution of enplanements between O&D and connecting traffic. The

¹¹ Northwest Airlines correspondence to WCAA dated December 29, 2006.

Forecast assumed that all connecting traffic at DTW is carried by Northwest and its regional affiliates, Mesaba and Pinnacle. The Forecast estimated that connecting traffic constitutes approximately 60 percent of enplanements by Northwest at DTW, approximately 94 percent of enplanements by Pinnacle and approximately 84 percent of enplanements by Mesaba. The Forecast assumed that the mix of traffic carried by Northwest, Pinnacle and Mesaba will remain stable over the forecast period.

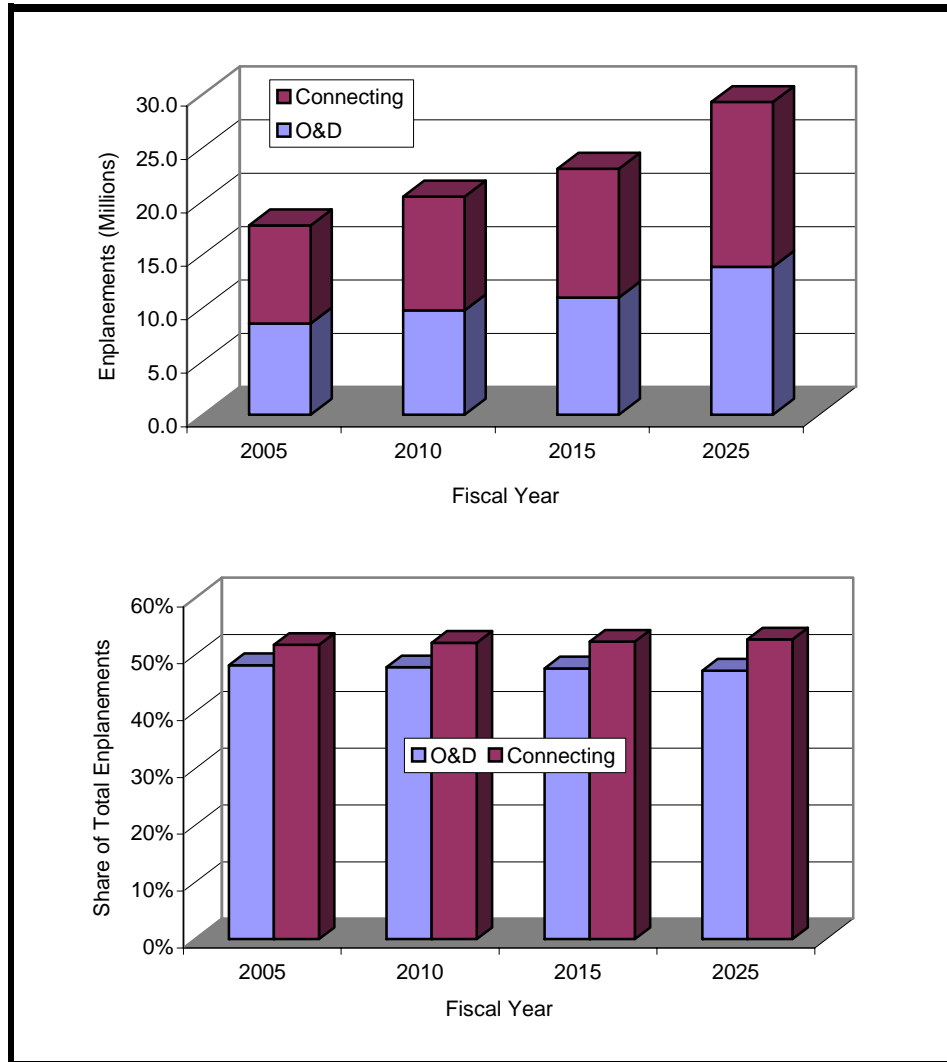
Table 3.2-8 Forecast O&D and Connecting Enplanements at DTW by Aircraft Type

Fiscal Year	Air Carrier			Commuter			Total		
	O&D	Connecting	Subtotal	O&D	Connecting	Subtotal	O&D	Connecting	Total
2005	7,755,929	6,853,733	14,609,662	782,205	2,318,703	3,100,908	8,538,135	9,172,435	17,710,570
2010	8,827,488	7,562,858	16,390,346	941,042	3,079,398	4,020,440	9,768,529	10,642,257	20,410,786
2015	9,873,062	8,458,644	18,331,706	1,096,231	3,587,227	4,683,458	10,969,293	12,045,871	23,015,164
2025	12,337,757	10,570,245	22,908,002	1,487,606	4,867,939	6,355,545	13,825,363	15,438,184	29,263,547
Average Annual Growth Rate									
2005-2025	2.3%	2.2%	2.3%	3.3%	3.8%	3.7%	2.4%	2.6%	2.5%
2005-2010	2.6%	2.0%	2.3%	3.8%	5.8%	5.3%	2.7%	3.0%	2.9%
2010-2015	2.3%	2.3%	2.3%	3.1%	3.1%	3.1%	2.3%	2.5%	2.4%
2015-2025	2.3%	2.3%	2.3%	3.1%	3.1%	3.1%	2.3%	2.5%	2.4%

The forecast results are as follows:

- O&D enplanements are forecast to grow from 8.54 million in FY 2005 to 13.83 million in FY 2025 at an average annual rate of 2.4 percent. Connecting enplanements are forecast to grow at an average annual rate of 2.6 percent. The slightly higher growth rate in connecting enplanements is also due to the continued expansion of commuter activity, particularly by Pinnacle and Mesaba, Northwest’s regional affiliates. As stated above, these two Northwest regional operators carry predominantly connecting traffic.
- The O&D share of total enplanements at DTW is projected to slightly decrease from 48.2 percent in FY 2005 to 47.2 percent in FY 2025. The connecting share is projected to slightly increase from 51.8 percent in FY 2005 to 52.8 percent in FY 2025.

Exhibit 3.2-5 Forecast O&D and Connecting Enplanements at DTW



3.2.2.2 Forecast Air Cargo

Table 3.2-9 presents forecast air cargo at DTW. Freight & express is forecast to increase from 235,375 in 2005 to 374,850 in 2025 at an average annual rate of 2.4 percent. Mail is forecast to remain constant at its 2005 level – 7,942 tons. In total, air cargo is forecast to increase from 243,317 in 2005 to 382,792 in 2025 at an average annual rate of 2.3 percent.

Table 3.2-9 Forecast Air Cargo at DTW

Calendar Year	Enplaned and Deplaned Air Cargo (In Tons)				
	Freight & Express		Mail		Total
	Tons	Share	Tons	Share	
2005	235,375	96.7%	7,942	3.3%	243,317
2010	279,769	97.2%	7,942	2.8%	287,711
2015	313,221	97.5%	7,942	2.5%	321,163
2025	374,850	97.9%	7,942	2.1%	382,792
Average Annual Growth Rate					
2005-2025	2.4%		-		2.3%
2005-2010	3.5%		-		3.4%
2010-2015	2.3%		-		2.2%
2015-2025	1.8%		-		1.8%

The forecast of freight and express represents the average of the forecast results of two time series regression models, one with lagged freight & express as one explanatory variable and the other with an auto regressive factor. Both models included time (year) as an explanatory variable, as well as a dummy variable to account for the effects of structural changes following the September 11, 2001, events: Both models have an adjusted R-squared of 0.90.

In addition to the forecast results, additional planning scenarios have been developed to support the economic growth of the region directly tied to cargo activity. Some of those initiatives include developing light rail from downtown Detroit to Ann Arbor with a connection to the Airport, developing new and connecting existing urban areas along the southern Detroit corridor between the DTW and the Willow Run airports and establishing this area as an “Aerotropolis.” The “Aerotropolis” concept includes utilizing the two airports, trucking, cargo shipping and rail lines to attract business and develop a high-tech center based on the cargo industry.¹² Though the potential incremental cargo demand from these initiatives is not reflected in the cargo forecast developed for this chapter (as they are only in the conceptual stages and are not measurable), the possible emphasis on and build-up of air cargo at DTW as a result of these initiatives should be noted. Additionally, potential growth beyond the FAA-approved forecast is not precluded as an evaluation factor, for the alternatives analysis will include growth flexibility beyond 2025 demand.

¹² University of Michigan, “Aerotropolis, a New City: Willow Run to Detroit Metro.” University of Michigan Detroit Design Charrette, 2006.

3.2.2.3 Forecast Commercial Aircraft Operations

As Exhibit 3.2-6 shows, commercial activity – the subtotal of air carriers and commuters – accounts for nearly all aircraft operations at DTW – from approximately 97.2 percent in FY 2005 to 97.7 percent in FY 2025. Table 3.2-10 presents forecasts of commercial aircraft operations at DTW. The February 2006 TAF provides a breakdown of forecast commercial aircraft operations between air carrier and commuter operators. In Table 3.2-10, air carrier and commuter aircraft operations are distributed further into scheduled passenger, charter and cargo aircraft operations. The Forecast made the following assumptions regarding charter and cargo share of operations based on trends in recent years:

- Charter carriers account for approximately 1.6 percent of passenger air carrier operations.
- All-cargo carriers account for approximately 0.7 percent of total commercial aircraft operations.
- Air carrier operators account for approximately 62 percent of cargo aircraft operations, and commuter operators account for the remaining 38 percent.

Table 3.2-10 Forecast Commercial Aircraft Operations at DTW

Fiscal Year	Air Carrier				Commuter			Total
	Passenger		Cargo	Subtotal	Scheduled Passenger	Cargo ^a	Subtotal	
	Scheduled	Charter						
2005	304,221	4,947	2,243	311,411	204,022	1,375	205,397	516,808
2010	325,560	5,294	2,567	333,421	256,492	1,573	258,065	591,486
2015	356,907	5,803	2,841	365,552	287,391	1,741	289,132	654,684
2025	418,129	6,799	3,434	428,362	360,833	2,105	362,938	791,300
Average Annual Growth Rate								
2005-2025	1.6%	1.6%	2.2%	1.6%	2.9%	2.2%	2.9%	2.2%
2005-2010	1.4%	1.4%	2.7%	1.4%	4.7%	2.7%	4.7%	2.7%
2010-2015	1.9%	1.9%	2.1%	1.9%	2.3%	2.1%	2.3%	2.1%
2015-2025	1.6%	1.6%	1.9%	1.6%	2.3%	1.9%	2.3%	1.9%

^a The cargo carriers that operate commuter aircraft are as follows: ABX Air, Ameristar, Astar, Kalitta Flying Services, Martinaire, and Airmet Systems.

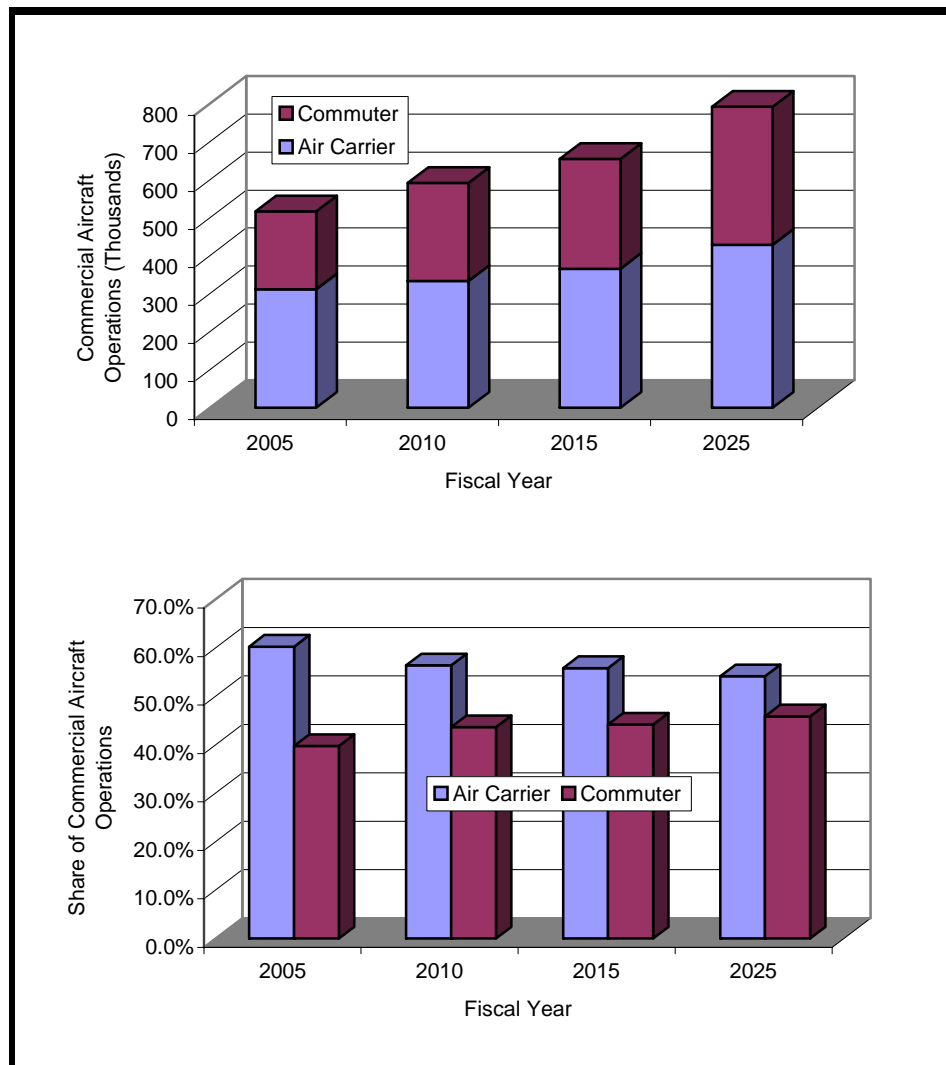
The forecasts of commercial aircraft operations are as follows:

- Total commercial aircraft operations are forecast to grow from approximately 517,000 in FY 2005 to approximately 791,000 in FY 2025 at an average annual rate of 2.2 percent. Following forecast trends in enplanement growth, commercial aircraft operations are projected to grow at a higher average annual rate of 2.7 percent during the first five years of the forecast period and then grow at slower average annual rates of 2.1 between 2010 and 2015, and 1.9 percent between 2015 and 2025.
- Air carrier aircraft operations are forecast to grow from approximately 311,000 in FY 2005 to 428,000 in FY 2025 at an average annual rate of 1.6 percent. Commuter activity is expected to continue growing at a faster rate than air carrier activity. Commuter aircraft operations are

forecast to grow from approximately 205,000 in FY 2005 to 363,000 in FY 2025 at an average annual rate of 2.3 percent.

- **Exhibit 3.2-6** shows the forecast trends in air carrier and commuter aircraft operations and relative shares. The air carrier share of commercial aircraft operations is forecast to decrease from approximately 60 percent in FY 2005 to approximately 54 percent in FY 2025. The commuter share of commercial aircraft operations is forecast to increase from approximately 40 percent in FY 2005 to approximately 46 percent in FY 2025.

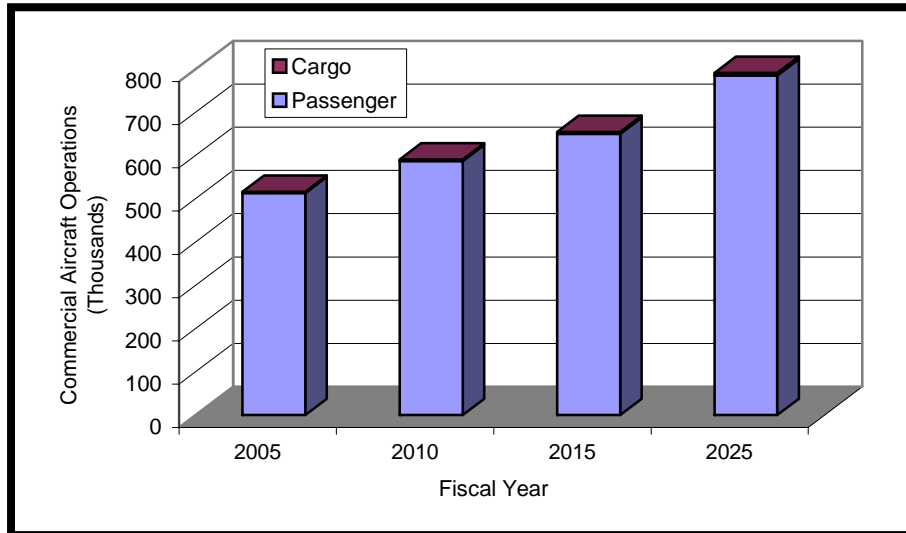
Exhibit 3.2-6 Forecast Air Carrier and Commuter Aircraft Operations at DTW



- **Exhibit 3.2-7** shows the forecast trends in passenger and cargo aircraft operations. Passenger aircraft operations are forecast to grow from approximately 513,000 in FY 2005 to approximately 786,000 in FY 2025 at an average annual rate of 2.2 percent. Cargo aircraft

operations are forecast to grow from approximately 3,600 in FY 2005 to approximately 5,500 in FY 2025, also at an average annual rate of 2.2 percent.

Exhibit 3.2-7 Forecast Passenger and Cargo Aircraft Operations



3.2.2.4 Forecast General Aviation and Military Operations

General aviation and military activity together account for an insignificant share of aircraft operations at DTW, decreasing from 2.8 percent in FY 2005 to 2.3 percent in FY 2025. As shown in **Table 3.2-11**, general aviation and military aircraft operations together are forecast to increase from approximately 15,000 in FY 2005 to nearly 19,000 in FY 2025 at an average annual rate of 1.1 percent.

Table 3.2-11 Forecast General Aviation and Military Aircraft Operations

Fiscal Year	General Aviation	Military	Total
2005	14,724	244	14,968
2010	15,824	244	16,068
2015	16,919	244	17,163
2025	18,517	244	18,761
Avg. Annual Growth Rate			
2005-2025	1.2%	0.0%	1.1%
2005-2010	1.5%	0.0%	1.4%
2010-2015	1.3%	0.0%	1.3%
2015-2025	0.9%	0.0%	0.9%

3.2.3 Forecast Commercial Aircraft Fleet Mix

To forecast the mix of commercial aircraft at DTW, the following was researched:

- Scheduled departures by airline and equipment for 2005 and 2006 as published in the OAG (BACK Aviation Solutions/OAG Schedules Database)
- Air traffic control data in 2004
- Detailed data on Northwest fleet, aircraft orders and aircraft deliveries (BACK Aviation Solutions/Lunkvist Fleet Databases)
- Data on aircraft orders and deliveries by airline from Boeing
- Data on aircraft orders and deliveries from Airbus
- Market outlook in the aircraft manufacturing industry
- Information on current fleet and future fleet changes from individual airline websites
- Data on commercial aircraft specifications from published and Internet sources

In general, the Forecast assumed a 30-year useful life for aircraft, except in the case of aircraft operated by cargo and charter carriers. **Table 3.2-12** lists the aircraft that are assumed to be retired over the forecast period. For each retired aircraft, the Forecast determined a suitable replacement – another aircraft with similar seat capacity and range capability – from an airline’s existing fleet or expected future aircraft deliveries.

The forecasts of aircraft operations by equipment and fleet mix are presented in **Table 3.2-13** for scheduled passenger carriers, **Table 3.2-14** for charter carriers, and **Table 3.2-15** for cargo carriers. **Table 3.2-16** presents a summary of aircraft operations by aircraft class. Narrowbody jets (including regional jets with 60 or more seats) and regional jets with less than 60 seats are projected to account for the two largest shares of commercial aircraft operations. Narrowbody jets (including regional jets with 60 or more seats) are projected to account for a declining share from approximately 58 percent in FY 2005 to approximately 52 percent in FY 2025. Regional jets with less than 60 seats are projected to account for an increasing share from approximately 27 percent in FY 2005 to nearly 45 percent in FY 2025. Widebody jets, which are estimated to account for 2.2 percent of commercial operations in FY 2005, are projected to decrease slightly in share to 2.0 percent in FY 2025. Turboprops are projected to decrease significantly in share from 13.2 percent in FY 2005 to one percent in FY 2025.

The significant decline in turboprops over the forecast period is consistent with the commuter fleet changes occurring industry-wide. Regional airlines are increasingly replacing turboprops with regional jets. Once Very Light Jets (VLJ) come to market, they will also likely replace the smaller turboprops.

The Airbus 380 is currently in production; however, it is not expected that the Airbus 380 will enter the DTW market over the forecast period.

Table 3.2-12 Projected Aircraft Retirement

Operator	Equipment Model	Aircraft Class	Seats	Year Delivered	Projected Retirement	Remarks
Northwest	Boeing (Douglas) DC10	W	273	1975-1988	2005-2018	Production terminated. Replace with A330-200.
British Airways	Boeing 767	W	189	1990	2020	Replace with B777.
Lufthansa	Boeing 747-400	W	390	1989	2019	Replace with A340-600 (10 in Lufthansa's fleet).
American	Boeing (Douglas) MD83	N	136	1987	2017	Production terminated. Replace with B737-800.
American	Boeing (Douglas) MD80	N	136	1983	2013	Production terminated. Replace with B737-800.
Delta	Boeing (Douglas) MD80	N	142	1987	2017	Production terminated. Replace with B737-800. Delta has 82 B737-800 delivered since 1998 and 50 unfilled orders.
Spirit	Boeing (Douglas) MD80	N	150	n.a.	2006	Replace with A321. Spirit is transitioning to an all new Airbus fleet in 2006.
Northwest	Boeing (Douglas) DC9	N	100	1967-1975	1997-2005	Production terminated. Replace with A319, ERJ-190 and CRJ-900.
Northwest	Boeing (Douglas) DC9-50	N	125	1975-1981	2005-2011	Production terminated. Replace with A319, ERJ-190 and CRJ-900.
America West	Boeing 757	N	190	1987	2017	Replace with A320.
Delta	Boeing 757	N	183	1984	2014	Replace with B737-800. Delta has 82 B737-800 delivered since 1998 and 50 unfilled orders.
United	Boeing 757-200	N	182	1989	2019	Replace with A320.
Continental	Boeing 737-500	N	114	1994	2024	Replace with B737-700.
Southwest	Boeing 737-500	N	122	1990	2020	Replace with B737-700. Southwest has 224 in fleet and 67 unfilled orders.
United	Boeing 737-500	N	116	1990	2020	Replace with A319.
US Airways	Boeing 737-400	N	144	1989	2019	Replace with A321.
Continental	Boeing 737-300	N	124	1994	2024	Replace with B737-700.
Delta	Boeing 737-300	N	128	1993	2023	Replace with B737-800. Delta has 82 B737-800 delivered since 1998 and 50 unfilled orders.
Southwest	Boeing 737-300	N	137	1984	2014	Replace with B737-700. Southwest has 224 in fleet and 67 unfilled orders.
United	Boeing 737-300	N	120	1986	2016	Replace with A319.
US Airways	Boeing 737-300	N	126	1984	2014	Replace with A321.
Delta	Boeing 737-200	N	100	1983	2013	Production terminated. Replace with B737-800.
Mesaba	Saab 340	T	34	n.a.	n.a.	Replace with CRJ-200 by 2015. Mesaba began flying CRJ-200 in 2005.

W - wide body jet; N - narrow body jet; and T - turboprop

Table 3.2-13 Forecast Scheduled Passenger Aircraft Operations by Aircraft Type and Fleet Mix at DTW

Aircraft Type	Seats	Commercial Aircraft Operations				Share of Commercial Aircraft Operations			
		2005	2010	2015	2025	2005	2010	2015	2025
Air Carrier (60 seats or more)									
Wide Body									
B747	393-403	2,886	3,089	3,386	3,937	0.6%	0.5%	0.5%	0.5%
DC10	273	822	0	0	0	0.2%	0.0%	0.0%	0.0%
A340	247-345	43	46	51	89	0.01%	0.01%	0.01%	0.01%
A330/B787	221-298	5,453	6,715	7,361	8,624	1.1%	1.2%	1.1%	1.1%
B777	227	628	672	737	979	0.1%	0.1%	0.1%	0.1%
B767	189	84	90	99	0	0.02%	0.02%	0.02%	0.0%
Subtotal - Wide Body		9,916	10,612	11,634	13,629	2.0%	1.8%	1.8%	1.7%
Narrow Body (Including RJs with 60 seats or more)									
B757	182-224	33,216	35,546	38,317	43,547	6.5%	6.1%	5.9%	5.6%
A320/321	138-198	39,464	50,431	56,429	68,622	7.8%	8.7%	8.8%	8.8%
MD80/83/87	136-150	18,094	11,164	4,779	0	3.6%	1.9%	0.7%	0.0%
A319/ERJ190/CRJ900	76-132	43,986	159,384	174,730	207,982	8.7%	27.4%	27.1%	26.7%
B737	100-167	24,132	25,825	35,281	42,482	4.7%	4.4%	5.5%	5.5%
DC9	100-125	104,951	0	0	0	20.6%	0.0%	0.0%	0.0%
B717	117	473	506	555	650	0.1%	0.1%	0.1%	0.1%
A318	114	740	792	868	1,017	0.1%	0.1%	0.1%	0.1%
BAe 146	100	286	307	336	394	0.1%	0.1%	0.1%	0.1%
ARJ70/85/100	69	24,202	25,900	28,394	33,264	4.8%	4.4%	4.4%	4.3%
ERJ170	70	1,585	1,697	1,860	2,179	0.3%	0.3%	0.3%	0.3%
CRJ700	64-70	3,175	3,397	3,724	4,363	0.6%	0.6%	0.6%	0.6%
Subtotal - Narrow Body		294,305	314,948	345,273	404,500	57.9%	54.1%	53.6%	51.9%
Subtotal-Air Carrier (60 seats or more)		304,221	325,560	356,907	418,129	59.9%	55.9%	55.4%	53.7%
Commuter (Less than 60 seats)									
Regional Jet (Less than 60 seats)									
CRJ	44-50	124,693	156,761	265,122	332,874	24.5%	26.9%	41.1%	42.7%
ERJ140/145	50	8,962	11,267	12,625	15,851	1.8%	1.9%	2.0%	2.0%
ERJ135	37	3,346	4,206	4,713	5,917	0.7%	0.7%	0.7%	0.8%
Subtotal - Regional Jet (Less than 60 seats)		137,001	172,234	282,460	354,642	27.0%	29.6%	43.8%	45.5%
Turboprop									
DH1/DH8	37	1,946	2,447	2,741	3,442	0.4%	0.4%	0.4%	0.4%
SF3	33-34	63,521	79,857	0	0	12.5%	13.7%	0.0%	0.0%
BE1	19	1,554	1,954	2,190	2,749	0.3%	0.3%	0.3%	0.4%
Subtotal - Turboprop		67,021	84,258	4,931	6,191	13.2%	14.5%	0.8%	0.8%
Subtotal - Commuter (Less than 60 seats)		204,022	256,492	287,391	360,833	40.1%	44.1%	44.6%	46.3%
Total - Scheduled Passenger Aircraft Operations		508,244	582,052	644,298	778,962	100.0%	100.0%	100.0%	100.0%

Table 3.2-14 Forecast Charter Aircraft Operations by Aircraft Type and Fleet Mix at DTW

Aircraft Type	Seats	Commercial Aircraft Operations				Share of Commercial Aircraft Operations			
		2005	2010	2015	2025	2005	2010	2015	2025
Wide Body									
A340	254	393	420	461	540	7.9%	7.9%	7.9%	7.9%
Subtotal - Wide Body		393	420	461	540	7.9%	7.9%	7.9%	7.9%
Narrow Body									
B757	220	56	60	66	77	1.1%	1.1%	1.1%	1.1%
A320/321	138-198	3,440	3,681	4,035	4,728	69.5%	69.5%	69.5%	69.5%
B727	173	1,058	1,132	1,241	1,454	21.4%	21.4%	21.4%	21.4%
Subtotal - Narrow Body		4,554	4,873	5,343	6,259	92.1%	92.1%	92.1%	92.1%
Total - Charter Aircraft Operations		4,947	5,294	5,803	6,799	100.0%	100.0%	100.0%	100.0%

Table 3.2-15 Forecast Cargo Aircraft Operations by Aircraft Type and Fleet Mix at DTW

Aircraft Type	Commercial Aircraft Operations				Share of Commercial Aircraft Operations			
	2005	2010	2015	2025	2005	2010	2015	2025
Air Carrier								
Wide Body								
A306	39	45	50	60	1.1%	1.1%	1.1%	1.1%
DC10	526	601	666	805	14.5%	14.5%	14.5%	14.5%
MD11	526	601	666	805	14.5%	14.5%	14.5%	14.5%
Subtotal - Wide Body	1,090	1,248	1,381	1,669	30.1%	30.1%	30.1%	30.1%
Narrow Body								
DC8/9	669	766	847	1,024	18.5%	18.5%	18.5%	18.5%
B727	484	554	613	741	13.4%	13.4%	13.4%	13.4%
Subtotal - Narrow Body	1,153	1,319	1,460	1,765	31.9%	31.9%	31.9%	31.9%
Subtotal - Air Carrier	2,243	2,567	2,841	3,434	62.0%	62.0%	62.0%	62.0%
Commuter								
FA20	57	65	72	87	1.6%	1.6%	1.6%	1.6%
LJ24/25/29/35/60	126	144	159	192	3.5%	3.5%	3.5%	3.5%
Cessna	587	672	743	899	16.2%	16.2%	16.2%	16.2%
BE58	402	460	509	615	11.1%	11.1%	11.1%	11.1%
PA31	204	233	258	312	5.6%	5.6%	5.6%	5.6%
Subtotal - Commuter	1,375	1,573	1,741	2,105	38.0%	38.0%	38.0%	38.0%
Total - Cargo Aircraft Operations	3,618	4,140	4,583	5,539	100.0%	100.0%	100.0%	100.0%

Source: BACK Aviation Solutions/OAG Schedules and Lunkvist Fleet Databases.

Table 3.2-16 Forecast Commercial Fleet Mix at DTW - Summary by Aircraft Class

Aircraft Class	Aircraft Operations				Share of Aircraft Operations			
	2005	2010	2015	2025	2005	2010	2015	2025
Wide Body	11,399	12,280	13,476	15,839	2.2%	2.1%	2.1%	2.0%
Narrow Body (Including RJs with 60 seats or more)	300,012	321,141	352,076	412,523	58.1%	54.3%	53.8%	52.1%
Regional Jet* (less than 60 seats)	137,126	172,378	282,619	354,834	26.5%	29.1%	43.2%	44.8%
Turboprop	68,271	85,687	6,513	8,104	13.2%	14.5%	1.0%	1.0%
Total	516,808	591,486	654,684	791,300	100.0%	100.0%	100.0%	100.0%

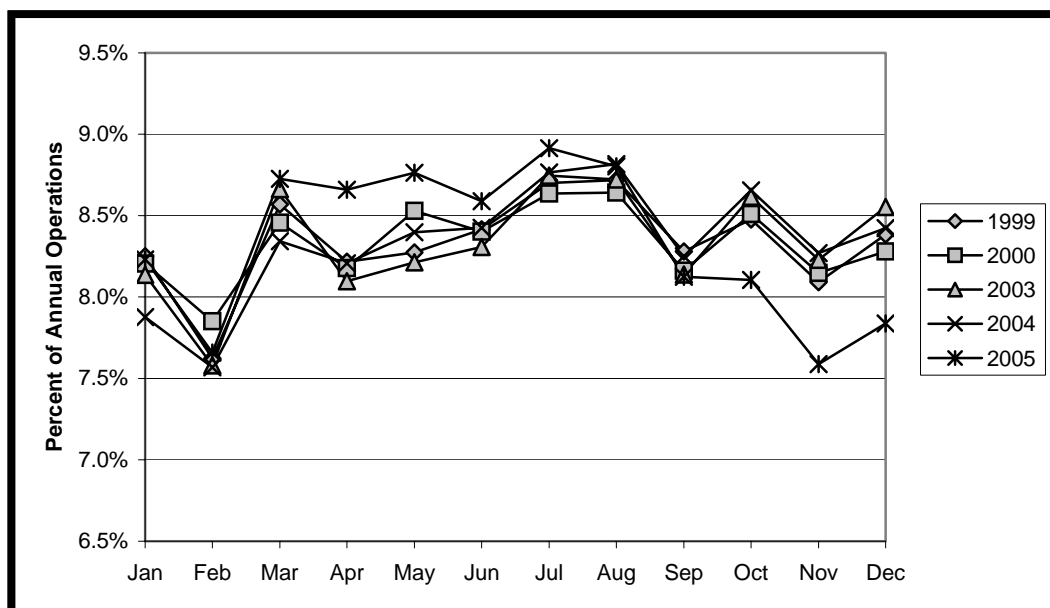
*Includes Lear Jet

3.2.4 Peak Activity

Forecasts of annual aircraft operations have been presented thus far. The volume of activity, however, varies by month, by day, and by time of day. For facility planning, design hour demand is typically based on activity during the peak hour of the average day of the peak month (Peak Month Average Day or PMAD). To translate forecasts of annual activity into forecasts of PMAD peak hour activity, the Forecast established the distribution of activity by month and by hour during the average day of the peak month, using data on scheduled passenger aircraft departures and arrivals from the BACK Aviation Solutions/OAG Schedules Database. Scheduled passenger aircraft account for approximately 96 percent of total aircraft operations at DTW.

Exhibit 3.2-8 shows the monthly distribution of scheduled passenger aircraft operations at DTW during the years 1999, 2000, 2003, 2004 and 2005.¹³ Clearly, the volume of aircraft operations is highest during the summer months of July and August. The peak occurred in August in three of the five sample years and in July in the remaining two years. For the purpose of this Master Plan Study, the month of August was determined as the peak month. On average, 8.74 percent of annual aircraft operations occur in August.

Exhibit 3.2-8 Monthly Distribution of Scheduled Passenger Aircraft Operations at DTW*



*Passenger aircraft operations which account for approximately 96 percent of total aircraft operations at DTW.

Exhibit 3.2-9 shows the hourly distribution of scheduled passenger aircraft arrivals, departures and operations during the PMAD, based on data during a one week sample in August 2005:

¹³ We excluded the years 2001 and 2002 from the study period because of unusual events that affected the monthly distribution of activity during those years.

- The peak hour for arrivals is 2:00-2:59 p.m.; 10.5 percent of scheduled daily passenger aircraft arrivals occur during this hour.
- The peak hour for departures is 3:00-3:59 p.m.; 11.5 percent of scheduled daily passenger aircraft departures occur during this hour.
- The peak hour for total operations (arrivals and departures) is 7:00-7:59 p.m.; 8.5 percent of scheduled daily passenger aircraft operations occur during this hour.

Exhibit 3.2-9 PMAD Hourly Distribution of Scheduled Passenger Aircraft Arrivals, Departures and Operations at DTW

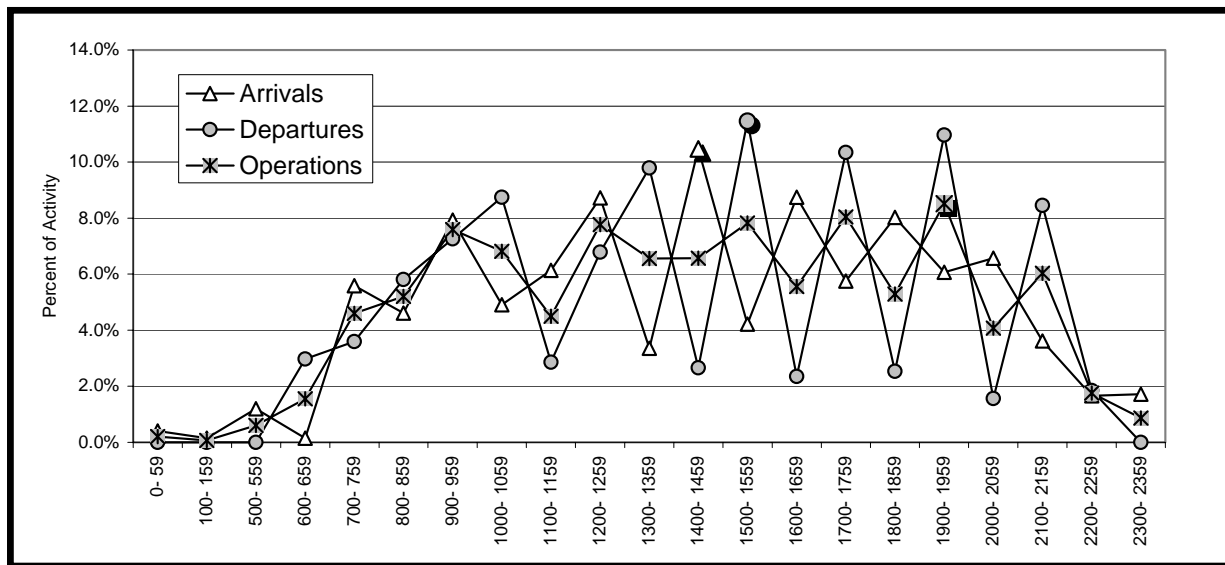


Table 3.2-17 presents forecasts of annual and peak commercial aircraft operations at DTW during 2005, 2010, 2015 and 2025.

Table 3.2-17 Forecast Annual and Peak Commercial Aircraft Operations at DTW

	Fiscal Year			
	2005	2010	2015	2025
Scheduled Passenger Aircraft Operations				
Annual	508,244	582,052	644,298	778,962
Peak Month (PM) ^a	44,420	50,870	56,310	68,080
PM Average Day (PMAD) ^b	1,433	1,641	1,816	2,196
PMAD Peak Hour ^c	122	140	155	187
Commercial Aircraft Operations (Scheduled Passenger, Charter and Cargo)				
Annual	516,808	591,486	654,684	791,300
Peak Month (PM) ^a	45,168	51,695	57,218	69,158
PM Average Day (PMAD) ^b	1,457	1,668	1,846	2,231
PMAD Peak Hour ^c	124	142	157	190

^a Peak month operations represent 8.74 percent of annual total.

^b PMAD operations equal the monthly total divided by 31 days.

^c PMAD peak hour operations represent 8.52 percent of average daily total.

3.3 Forecast Summary

The FAA's 2006 TAF serves as the base forecast for enplanements and aircraft operations in this Master Plan Study. The 2006 TAF has been independently validated through a rigorous and comprehensive analysis. A copy of the Federal Aviation Administration Forecast letter approving the Forecast of Aviation Activity is provided for reference in the Master Plan Supporting Information.

Table 3.3-1 presents the forecast summary:

- Enplanements are forecast to increase from approximately 17.71 million in FY 2005 to 29.26 million in FY 2025, averaging an annual growth rate of 2.5 percent over the 20-year forecast period.
- Air cargo is forecast to increase from 243,317 tons in FY 2005 to 382,792 tons in FY 2025 at an average annual growth rate of 2.3 percent.
- Aircraft operations are forecast to increase from 531,776 in FY 2005 to 810,061 in FY 2025 at an average annual growth rate of 2.1 percent.

Table 3.3-1 Summary of Aviation Activity Forecast for DTW

Fiscal Year ^a	Enplanements			Cargo (In Tons)			Aircraft Operations				
	Air Carriers ^b	Commuters ^c	Total	Freight & Express	Mail	Total	Air Carriers ^b	Commuters ^c	General Aviation	Military	Total
2005	14,609,662	3,100,908	17,710,570	235,375	7,942	243,317	311,411	205,397	14,724	244	531,776
2010	16,390,346	4,020,440	20,410,786	279,769	7,942	287,711	333,421	258,065	15,824	244	607,554
2015	18,331,706	4,683,458	23,015,164	313,221	7,942	321,163	365,552	289,132	16,919	244	671,847
2025	22,908,002	6,355,545	29,263,547	374,850	7,942	382,792	428,362	362,938	18,517	244	810,061
Average Annual Growth Rate											
2005-2025	2.3%	3.7%	2.5%	2.4%	0.0%	2.3%	1.6%	2.9%	1.2%	0.0%	2.1%
2005-2010	2.3%	5.3%	2.9%	3.5%	0.0%	3.4%	1.4%	4.7%	1.5%	0.0%	2.7%
2010-2015	2.3%	3.1%	2.4%	2.3%	0.0%	2.2%	1.9%	2.3%	1.3%	0.0%	2.0%
2015-2025	2.3%	3.1%	2.4%	1.8%	0.0%	1.8%	1.6%	2.3%	0.9%	0.0%	1.9%

^a The fiscal year ends in September. The figures for 2005 represent an estimate; and the figures for 2006-2025 represent forecast.
^b This category includes both scheduled and unscheduled air carrier (60 seats or more) operations. Operations may include passenger cargo aircraft.
^c This category includes both scheduled and unscheduled commuters and air taxi (less than 60 seats) operations. Operations may include passenger or cargo aircraft.

Source: Federal Aviation Administration, Terminal Area Forecast, February 2006.

3.4 Updated Terminal Area Forecast Review

The Master Plan Study reviewed additional forecast data subsequent to the approval of the Master Plan forecast. Both the 2007 and 2008 TAF’s were evaluated and compared to the 2006 TAF. The activity forecast in the 2007 and 2008 TAF’s were lower than the activity forecast in the February 2006 TAF. Despite the subsequent issuance of additional TAF’s in 2007 and in 2008, the 2006 TAF is believed to represent the most likely growth scenario over the planning horizon. Due to cyclical trends of aviation activity, it is believed that the activity forecast in the 2007 and 2008 TAFs will trend toward the 2006 TAF over time and that no adjustment to the master plan forecast is warranted at this time. A Master Plan Technical Memorandum on the 2007/2008 TAF Analysis is provided in the Master Plan Supporting Information.