



# Texarkana Regional Airport

## Cargo Air Service Development Feasibility Study

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# 1 INTRODUCTION

## 1.1 Background and Objectives

In September 2021, the Texarkana Regional Airport (“TXK” or “the Airport”) engaged Coffman Associates to provide professional airport consulting services related to a full range of aviation development needs. The Airport placed special emphasis on the need for a cargo air service development feasibility study. Subsequently, in 2022, the Airport requested a Master Plan update and the envisioned air cargo study was included as an element of that effort. To address this work, Coffman Associates partnered with Hubpoint Strategic Advisors, LLC – an aviation industry consultancy with deep experience in the air cargo sector. Hubpoint led the Cargo Air Service Development Feasibility Study (“the Study”) to accomplish the following major objectives:

1. Assess the current situation for air cargo at TXK;
2. Analyze the regional air cargo market;
3. Determine the feasibility for air cargo services at TXK; and
4. Develop long-term air cargo forecasts based on the findings of the Study.

This report describes the methodology and results of Hubpoint’s work. Further, the report provides contextual information on the air cargo industry, current trends and relevant markets in order to put the findings in proper perspective. The TXK air cargo forecasts, informed by the Study, will then be utilized by the Master Plan team to determine the future needs at the Airport related to air cargo.

The air cargo industry is currently in a period of substantial change. Initially, this change was driven by extraordinary growth in e-commerce which led to increased global air cargo activity, particularly in the U.S. market. Conversely, tariffs and trade wars between the U.S. and foreign countries, including China, had negative impacts on air cargo. Finally, the COVID-19 pandemic led to demand spikes for various commodities shipped by air and, eventually, triggered a global supply chain crisis. These events have undoubtedly led to permanent, structural changes in the air cargo industry, many of which impact small- and medium-size airports. These types of airports typically only handled shipments related to the integrated express carriers and certain passenger aircraft. Now, a number of U.S. airports are experiencing new domestic and international freighter aircraft operations. Consequently, air cargo has taken on a higher level of importance, requiring airports to better understand their infrastructure and facilities needs.

From a planning perspective, airports must understand the drivers of air cargo demand, the types of goods flowing through their facilities and the requirements for efficient movement on both the airside and the landside. With this understanding and a perspective on future growth, effective plans can be developed. Due to the changes in all air cargo segments (general cargo, integrated express, e-commerce) and the general lack of detailed, publicly available air cargo data, formal market studies are conducted to provide the necessary inputs for airport planning.

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## 1.2 Methodology and Approach

Airports seeking to plan for air cargo growth and development must have an understanding of their relevant markets as well as the overarching trends shaping the industry. Hubpoint analyzed Texarkana's regional air cargo market using primary and secondary research methods.

The secondary research included analysis of historic operational statistics for TXK and other nearby airports and reviews of air cargo industry news publications. Air cargo databases from the U.S. Department of Transportation's (U.S. DOT) T-100 reports and the U.S. Census Bureau's Foreign Trade Statistics were also utilized to enable valuable quantitative analysis. The T-100 reports provide monthly data by air carrier and by direction for air freight and mail at U.S. airports. To complement data sourced from the T-100, Hubpoint referenced annual cargo tonnage statistics reported by Airports Council International – North America (ACI-NA) and data from Boeing's latest World Air Cargo Forecast. Also, Foreign Trade Statistics, reported by the U.S. Census Bureau, were utilized to assess international air cargo flows by U.S. state, foreign countries, and gateway airports.

From Hubpoint's experience in other air cargo studies, it is clear that a thorough analysis of air cargo markets must include primary research. Secondary research is valuable and necessary, but it cannot provide the granular detail required to understand the dynamics of individual markets. Further, publicly available air cargo data lacks the type of detail and transparency that is often found in other segments of the aviation industry such as the robust data that is available for passenger air travel. Importantly, primary research (particularly in the form of stakeholder interviews) allows the consulting team to obtain forward-looking information and valuable firsthand insights from groups currently operating in the markets of interest.

For this study, Hubpoint conducted personal interviews with several stakeholders in the Texarkana area. The meetings and interviews produced valuable information about current shipping practices, industry trends and the potential for air cargo activity in the relevant market.

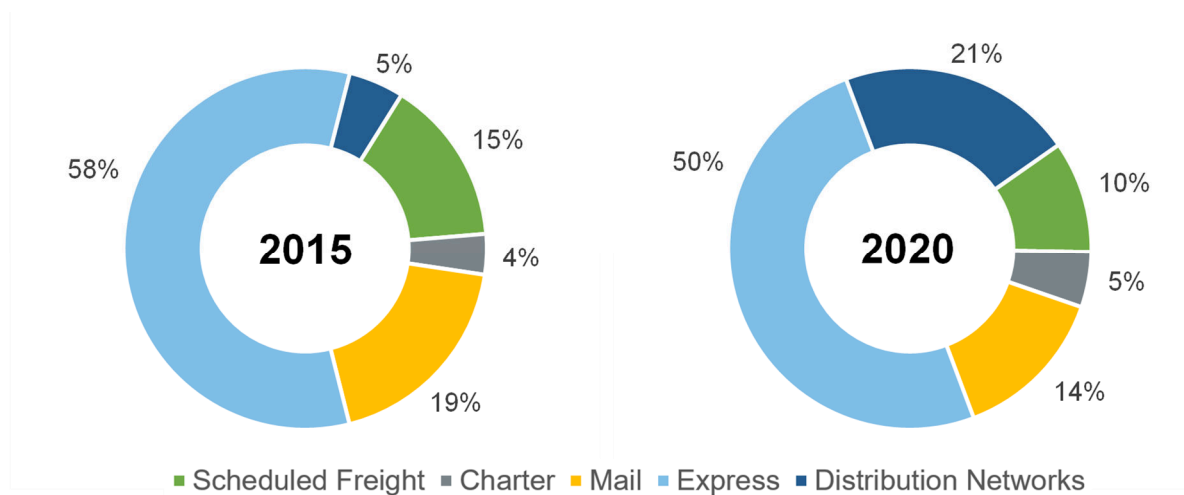
## 2 AIR CARGO INDUSTRY TRENDS

To provide context for this report, it is helpful to review air cargo industry trends that may impact the Texarkana Regional Airport. Although some trends may be considered episodic in nature and related to the global pandemic, others pre-date 2020. It is very likely that many of these industry trends signify structural change that will continue well into the future and, therefore, they are relevant to consider in airport planning.

### 2.1 Growth of U.S. Domestic Air Cargo

Between 1990 and 2015, the U.S. domestic air cargo (freight and mail) market was in an overall state of low growth. Over the 25-year period, the compound annual growth rate was just 1.6%. Although the market is large compared to many other world regions, it is mature and dominated by the duopoly of FedEx Express and UPS. Further, in this same timeframe, increased sophistication and reliability of competitive trucking services in the U.S. hampered air cargo growth, kept pricing in check and stunted innovation. However, between 2016 and 2018, the growing influence of e-commerce was evident as domestic air cargo volumes rose sharply. This also coincided with new entrant Amazon Air gaining scale with an expanding aircraft fleet and network of U.S. airports. The influence of Amazon Air on the domestic air cargo environment can be observed in the market share gains by “Distribution Networks” between 2015 and 2022 (see **Exhibit 2.1**). Amazon Air initiated its U.S. services in 2016 and is categorized by Boeing as a “Distribution Network” carrier. In 2015 (pre-Amazon Air), the segment accounted for 4.9% of domestic air cargo. By 2020, the segment (now including Amazon Air) had grown to 21.4% of the total. Therefore, it is clear that the share shifts are largely attributable to Amazon Air and have particularly come at the expense of the integrated express carriers.

**Exhibit 2.1**  
**U.S. Air Cargo Market Share by Carrier Category**

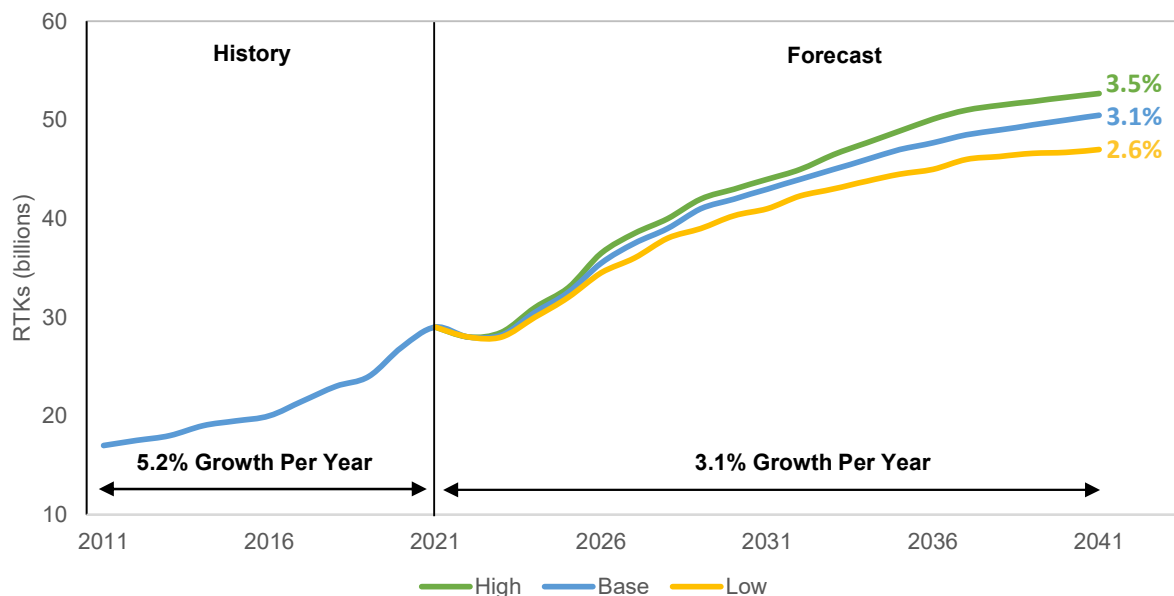


Note: Express category refers to integrated express carriers (e.g., FedEx, UPS)

Source: Hubpoint analysis of Boeing World Air Cargo Forecast data

The Boeing World Air Cargo Forecast (WACF) is a standard industry reference tool for estimating future air cargo growth in various global markets, including the U.S. domestic market. In the latest WACF published in November 2022, the U.S. domestic market is expected to grow at an average annual rate of 4.3% from 2022-2031 and an average of 3.1% for the 20-year full forecast 2022-2041 (see Exhibit 2.2). The higher growth rate through 2031 is expected primarily due to the rapid rise of e-commerce in the U.S. This contrasts with the pre-COVID 10-year period 2009-2019 when domestic cargo traffic grew at an average annual rate of 3.3%. That period included a recovering U.S. economy following the Great Recession in 2009-2010, as well as the U.S. foreign tariffs and trade wars of 2018-2019 which negatively impacted domestic and international cargo traffic.

**Exhibit 2.2**  
**U.S. Domestic Annual Air Cargo Traffic (2011-2041F)**



Source: Boeing World Air Cargo Forecast

Finally, it should be noted that the large, resilient U.S. domestic air cargo market not only survived during the pandemic, but thrived. This was largely a result of e-commerce where health concerns and social distancing led consumers to avoid brick-and-mortar stores and shop online instead. Supply chain challenges and shipments of Personal Protective Equipment (PPE) also pushed cargo volumes higher between 2020 and 2022. Notably, in Year 1 of the pandemic (2020), a statistical report produced by the ACI-NA showed that for the 200 U.S. airports analyzed, 100% experienced negative growth in passenger air travel compared to 2019. In contrast, more than 42% of these same airports recorded positive air cargo growth between 2019 and 2020.

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## 2.2 E-Commerce

The growth of e-commerce has undoubtedly had a large and sustained impact on the U.S. air cargo industry. E-commerce has permanently changed consumer behavior and continues to have transformative effects on transportation networks. In the mid-1990s, as e-commerce truly gained momentum with companies like eBay and Amazon, it quickly became clear that fast, reliable and inexpensive shipping was a key differentiator for online sellers. In those early days of modern e-commerce, start-up companies accepted a lack of profits to gain market share. With that mindset, delivery costs for shipments to individual consumers were subsidized with the capital companies raised from investors.

The major U.S. integrated express carriers, FedEx and UPS, were ideally positioned to serve the growing e-commerce market. In the prior decades, the express carriers had invested heavily in facilities, equipment and technology to compete and better serve customers. With that, the integrators were able to offer the kinds of services e-commerce companies and their customers demanded. These services included door-to-door delivery involving a variety of transportation modes, package tracking, and return processes for unwanted orders.

Importantly, air cargo and e-commerce have been interdependent in terms of their growth. Given consumer expectations for deliveries and the often-vast distances between fulfillment centers and individual addresses, e-commerce companies must incorporate air transportation in their businesses to survive. Evidence of this is readily seen in Amazon Air's U.S. network which, in just eight years, has assembled a fleet of approximately 90 aircraft serving over 50 domestic markets. At the same time, e-commerce activity awakened the stagnant domestic air cargo market and encourages competition and innovation amongst air carriers.

Importantly, Amazon Air is just one company flying e-commerce packages in the U.S. FedEx and UPS continue to prioritize e-commerce in their air networks and passenger airlines also often carry e-commerce for their freight forwarder customers. The U.S. Postal Service is also contracted by e-commerce companies to deliver shipments by air (often via its partner FedEx). Finally, more competitors may eventually enter the market. In 2020, news reports revealed that Walmart had considered establishing its own U.S. freighter network to compete with Amazon. While the concept failed to move forward, it is likely that Walmart and other large retailers continue to assess potential strategies related to air cargo services.

In recent months, e-commerce activity has been in a lull after reaching record highs during the pandemic. Despite this inevitable slow down, industry experts are convinced that growth in the sector will return over the long-term. Airports wishing to participate in this growth should be aware of the opportunities and challenges that e-commerce air cargo can create. From a planning perspective, this involves understanding potential e-commerce air services and the associated infrastructure and facilities required to support those activities.

## 2.3 Use of Alternative Cargo Airports in the U.S.

For much of the history of commercial air cargo, large international gateway airports have held dominant shares of the U.S. air cargo market. Large airports in New York, Chicago, Los Angeles and Miami attract high concentrations of domestic and international air services by both



passenger and all-cargo airlines. This is driven by the high levels of population and business activity, including demand for goods shipped by air for consumer and manufacturing purposes. Additionally, freight forwarders, who utilize the air cargo capacity of airlines, found value in consolidating customer shipments at large airports. At these airports, forwarders can realize economies of scale, maximize utilization of resources and leverage their size and competitive airline services to obtain favorable pricing for their air transportation needs.

It is likely that the largest U.S. airports will always attract large amounts of air cargo, if for no other reason because airlines will continue offering high levels of service to many nonstop destinations and, therefore, provide much capacity to carry cargo. However, there is growing acceptance for the use of alternative airports in the U.S. air cargo market. For many years, Rickenbacker International Airport (LCK) in Ohio and Huntsville International Airport (HSV) in Alabama have successfully served shippers, freight forwarders and airlines with strategic geographic locations and welcoming air cargo environments. Now, smaller airports like Greenville-Spartanburg International Airport (GSP), Chicago-Rockford International Airport (RFD), Birmingham–Shuttlesworth International Airport (BHM) and Phoenix-Mesa Gateway Airport (AZA) are attracting the interest of forwarders who are dictating where cargo flights operate.

Major forwarding companies like Keuhne + Nagel, DSV and DB Schenker are operating flights between select U.S. airports and international markets. These forwarder-controlled networks offer their shipping customers direct service to airports close to the actual point of demand. In doing so, they avoid the congestion and expense of larger airports in big cities. Adding to the momentum, large ocean container shipping companies like Maersk and MSC have entered the air cargo market with their own aircraft in order to provide a full suite of services and to ensure that certain shipments continue to move even when seaport disruptions occur. Importantly, industry leaders have attested to the long-term, sustainable nature of these cargo air services at alternative airports.

While the forwarder-controlled networks tend to handle heavy freight shipments of industrial customers at smaller airports, other small, alternative cargo airports are serving the needs of e-commerce carriers. Since Amazon Air commenced operations in 2016, it has designated key roles for some domestic airports that can be considered alternative cargo airports. These include Lehigh Valley International Airport (ABE) in Pennsylvania and Lakeland Linder International Airport (LAL) in Florida. Each of these airports had modest air cargo activity prior to Amazon Air, but have transformed their infrastructure and operating models to allow for cargo growth. In turn, parent company Amazon has invested in these communities with additional fulfillment centers leading to more jobs, which then support other local businesses.

In general, alternative cargo airports offer low costs, efficient airside and landside movement of cargo, and ready access to markets by truck and air. As these alternate airports have proven to be viable, there is more acceptance within the air cargo community to consider their added value in the supply chain. In turn, these air cargo operations have helped diversify the revenue streams of airports and contributed positively to regional economic development.

## 2.4 Nearshoring

Due to the recent pandemic-induced global supply chain disruptions, there has been wide recognition that manufacturing activities are over-concentrated in certain geographic regions. In particular, extremely high levels of manufacturing in China had enormous negative impacts when that country instituted long and widespread shutdowns of cities to control the spread of COVID-19. Situations like this have led companies to diversify the locations and roles of their production facilities to mitigate risks of future disruptions. Although this strategy will take time to implement, there are already signs that the moves will have material impacts on supply chains and the utilization of air cargo.

Many companies operating in the U.S. are changing longstanding practices of sourcing goods from distant geographies and unstable regions of the world by obtaining those goods from places closer to home. Nearshoring and reshoring of production facilities among manufacturers has been taking place for years, but activity is clearly accelerating. A recent survey by a large manufacturer found that 70% of U.S. manufacturing companies plan to establish or relocate production closer to home, their customers or potential buyers. From a macro perspective, nearshoring can potentially solve supply chain issues related to national security, health security and overall competitiveness.

From an air cargo perspective, increased manufacturing in Mexico and Latin America can have major impacts on the way markets are served. For example, the major Asia-to-U.S. trade lane requires large aircraft flying vast distances and primarily operating at the largest airports to pick up and deliver cargo. As distances between where goods are produced and where they are consumed shorten, smaller aircraft can be utilized to transport cargo. Further, due to the proximity of the markets being served, the aircraft can operate at higher frequencies (i.e., more flights in a given time interval). In such a scenario, cargo airlines flying smaller aircraft would not need to restrict their services to only large airports. Smaller airports that are close to the origins and ultimate destinations of shipments become relevant and, perhaps even preferable, to shippers and cargo airlines.

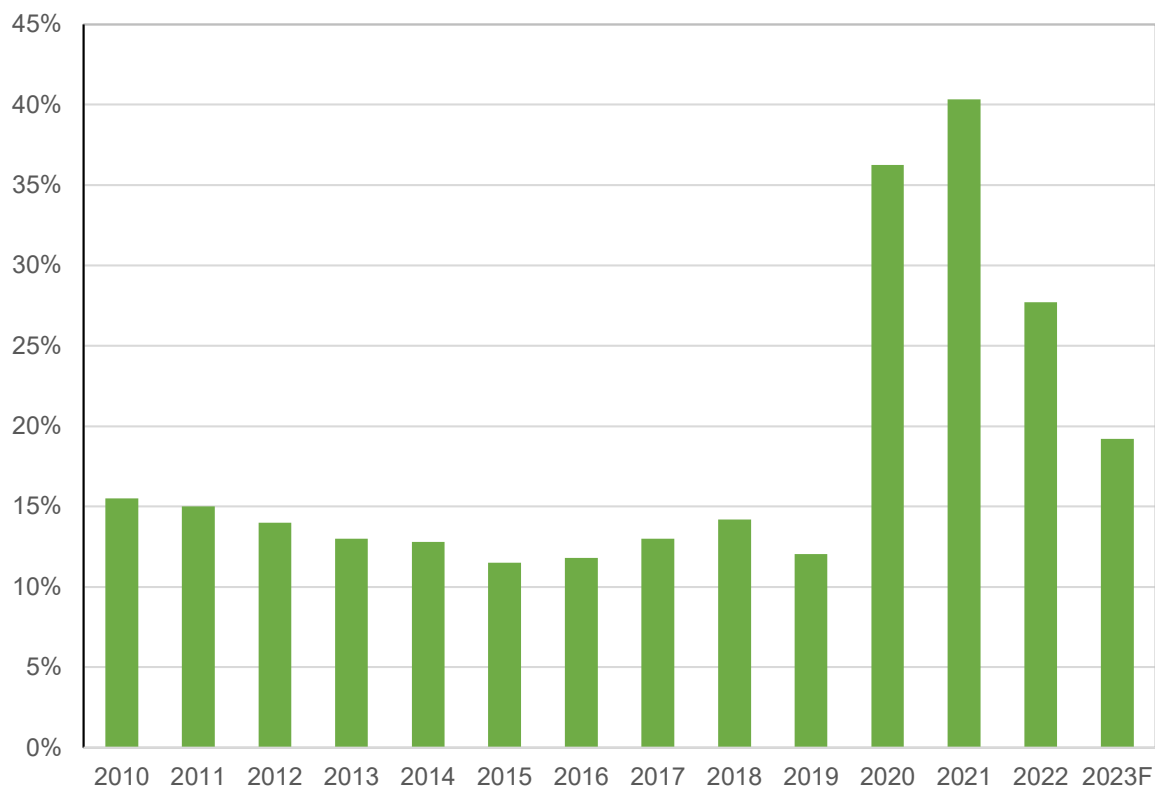
## 2.5 Elevated Importance of Cargo to Passenger Airlines

Another notable trend related to the pandemic involves the elevated importance of cargo to U.S. passenger airlines. It is well-documented that COVID-19 led to a devastating loss in air travel demand, particularly for international markets. This situation was particularly impactful to the air cargo industry where approximately 50% of air cargo is transported in the bellies of passenger airlines – especially on cargo-friendly widebody aircraft that typically fly intercontinental routes.

During the pandemic, American Airlines, United Airlines, Delta Airlines and Southwest Airlines all operated passenger aircraft as freighters with much success. The cargo operations materially improved airlines' financial standing. As a result, airline management fully realized the impact that air cargo can have on airline route economics and several leading U.S. airlines have stated that the focus on air cargo will remain elevated even in the post-pandemic environment. This includes decisions related to new and existing routes where cargo can make the difference between profitable and unprofitable operations.

In a December 2022 report, the International Air Transportation Association (IATA) found that air cargo accounted for over 40% of global airline revenue in 2021. Of course, this was at the height of the pandemic when passenger travel was still heavily restricted. Since then, as passenger travel has returned, air cargo’s share of total revenue has moderated. While this correction was inevitable, air cargo has maintained a much higher share of revenue than was experienced in the decade prior to the pandemic. IATA forecasts that in 2023, air cargo will account for 19% of total global airline revenue – a level over 1.5 times larger than the pre-pandemic year 2019 when air cargo’s share of revenue was just 12%. See **Exhibit 2.3**.

**Exhibit 2.3**  
**Global Airline Industry Cargo Revenue as a Percentage of Total Operating Revenue**



Source: IATA Economic Airlines Financial Forecast update, December 2022

The new attention devoted to air cargo by U.S. airlines will likely lead to a more competitive market environment where costs, service levels, and operational efficiencies are scrutinized. Airports will surely be integral and influential to these changes. Therefore, airports should be prepared for additional belly cargo volume and the increased demands that will have on both airside and landside activities.

## 2.6 Other Emerging Trends

Increasingly, the U.S. air cargo industry has been faced with severe delays and congestion at certain airports. Although some of the root causes relate to the pandemic and may naturally fade, many issues existed before COVID-19 and persist in the aftermath. These issues relate to a lack of labor to process cargo, increased trucking activity at airports and the continuation of paper-based documentation. To counter these issues, some airports are turning to cargo community systems (CCS) – cloud-based technology that seek to reduce congestion, increase data visibility and increase throughput at air cargo facilities. Currently, airports in Chicago, Philadelphia, Atlanta and Dallas-Fort Worth are deploying CCS developed by providers like Kale Logistics and Nallian.

The concept of CCS is to join all members of the air cargo ecosystem (e.g., airlines, ground handlers, freight forwarders, truckers, shippers) in a common technology platform. Ultimately, through seamless communications, information can be shared in a secure and timely manner to optimize air cargo operations. For instance, truckers are known to cue up at airport cargo facilities well before their shipments are ready for pick up. This causes congestion for other truckers whose shipments are available. A CCS would solve this issue by alerting truckers when their shipments are available and scheduling their trip to the cargo facility. Other CCS functions would process all required documents electronically and help ground handlers effectively plan daily activities and utilize resources better.

Finally, in April 2023, FedEx announced the planned consolidation of its FedEx Express and FedEx Ground units. This merger of operations had been rumored for many years and is now part of a corporate transformation strategy. FedEx shareholders hope that the phased transition will lead to greater efficiencies and higher profitability. The company has stated that in order to cut costs, it will seek to fly less and use trucking more. This may have downline impacts on some airports which could experience fewer flight operations or lose FedEx Express services altogether.

## 2.7 Summary

The past five years have been extraordinarily active for air cargo in the U.S. This includes Amazon Air's market entry, the impacts related to the COVID-19 pandemic and the trend toward alternative cargo airports. The once stagnant, duopoly-controlled domestic U.S. market is now in positive motion with the influx of competition and the need to innovate. The pandemic has brought its own opportunities and challenges and some of the resulting effects may prove to be permanent fixtures of the air cargo industry. The trends outlined above are notable because they likely impact airports of all sizes, including smaller airports like Texarkana Regional Airport. Although air cargo dynamics at smaller airports have been relatively stable in the recent past, a new environment exists which deserves the attention of airport management and planners. The pace of air cargo activity and developments has accelerated and prepared airports will be well-positioned to capitalize on available opportunities.

### 3 CURRENT SITUATION FOR AIR CARGO AT TEXARKANA REGIONAL AIRPORT

#### 3.1 Overview of Air Cargo at TXK

Located on the border of Arkansas and Texas, TXK is a convenient airport for the Twin Cities of Texarkana, AR and Texarkana, TX as well as many other cities in Southwest Arkansas and Northeast Texas. In 2022, approximately 70,000 passengers utilized TXK, ranking it as the fourth largest commercial airport in Arkansas in terms of passenger volume. Historically, the vast majority of passenger operations at TXK have been performed with regional jets affiliated with network carrier American Airlines. These smaller passenger aircraft have little belly capacity to carry meaningful amounts of cargo. In 2022, the American began operating more larger 70-seat CRJ-700 regional jets at TXK, but most operations still utilized smaller 50-seat EMB-145 regional jets. United Airlines also served TXK with EMB-145 aircraft for part of 2022, before suspending the flights in September. While American and other network carriers plan to divest of their smaller 50-seat regional jets, TXK would likely need to attract a true mainline jet in order to see significant levels of belly cargo on passenger operations. Currently, TXK has no scheduled air cargo flight operations. **Exhibit 3.1** provides a comparison of TXK to select airports in the general region in terms of cargo tonnage handled in 2022.

**Exhibit 3.1  
Air Cargo Tonnage at Select Airports (2022)**

Airport Code	City/State	Airport Name	Total Cargo (Metric Tons)	Change 2022-2021
MEM	Memphis, TN	Memphis International Airport	4,042,679	-9.8%
DFW	Dallas-Ft. Worth, TX	Dallas-Fort Worth International Airport	818,933	-10.1%
IAH	Houston, TX	Houston George Bush Intercontinental Airport	542,072	3.4%
AFW	Fort Worth, TX	Fort Worth Alliance Airport	377,389	1.6%
SHV	Shreveport, LA	Shreveport Regional Airport	25,401	-6.1%
LIT	Little Rock, AR	Bill and Hillary Clinton National Airport	17,237	-7.3%
JAN	Jackson, MS	Jackson Medgar-Wiley Evers International Airport	9,804	4.1%
XNA	Bentonville, AR	Northwest Arkansas National Airport	26	-3.7%
<b>TXK</b>	<b>Texarkana, AR</b>	<b>Texarkana Regional Airport</b>	<b>1</b>	<b>0.0%</b>

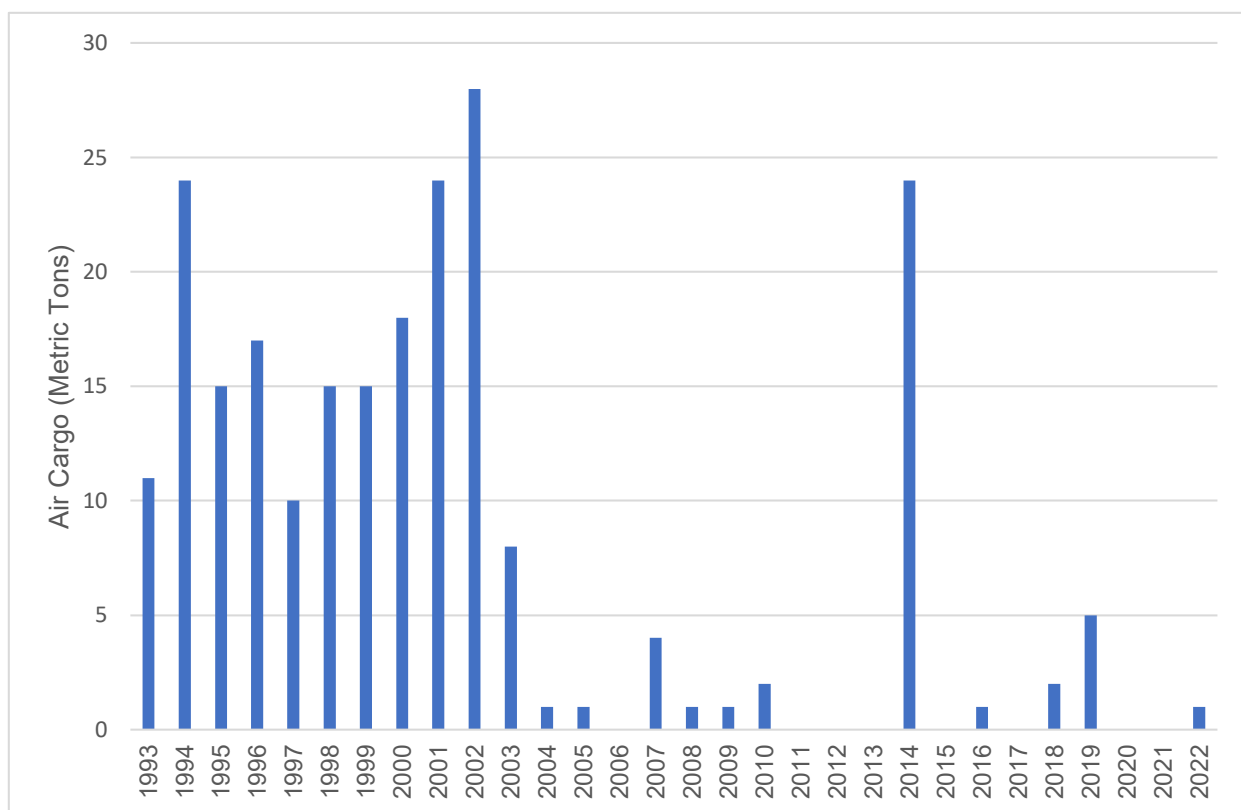
Source: Hubpoint analysis of Airports Council International North America (ACI-NA) data.

As shown in the exhibit above, TXK reported, by far, the lowest air cargo activity amongst airports in the region. That is not to say that the Texarkana area lacks air cargo demand or that

demand is being unserved. In the absence of regular, scheduled TXK cargo service, air cargo generated in Texarkana “leaks” to other airports and is then reported in those airports’ statistics.

A timeseries review of TXK air cargo tonnage as reported by the U.S. DOT is shown in **Exhibit 3.2**. During the period 1993-2022, the Airport generally handled low cargo volumes and, in several years, recorded no cargo activity at all. Notably, after 2002, the Airport saw just two years where air cargo exceeded 5 metric tons. The inconsistencies shown in the historic data are indicative of changes in the types of air services available at TXK and usable cargo capacity on those flights. Historically, most of the cargo at TXK has been carried by passenger airlines. However, multiple cargo charter operators have utilized the Airport in the past, as well.

**Exhibit 3.2**  
**TXK Air Cargo Tonnage (1993-2022)**



Source: Hubpoint analysis of U.S. DOT, T-100 Carrier Reports

### 3.2 TXK Air Cargo Infrastructure

Infrastructure and facilities provided at the Texarkana Regional Airport enable safe and efficient operations by the airport’s various users. This includes runways, taxiways, ramp space, facilities, truck parking and staging areas, and on-airport access roads. TXK’s current and planned infrastructure is shown in **Exhibit 3.3** below. Further, TXK is located within 2 miles of

two Interstate 49 exits. This north-south interstate then connects to Interstate 30 and the major east-west highway Interstate 20, providing excellent access to important markets and trucking routes for freight.

The Airport’s primary runway (RWY 04/22) is 6,601 feet long and 150 feet wide with ILS and GPS approaches. There is also a crosswind runway (RWY 13/31) which is 5,200 feet long and 100 feet wide with GPS approaches. TXK is currently seeking funding to lengthen and strengthen RWY 04/22 in order to accommodate larger aircraft. A new passenger terminal is under construction on the south side of the airport and a new access road to the terminal has been completed for passenger vehicles and other airport users. Although TXK does not currently have an air cargo facility, it recently acquired additional land just south of the new passenger terminal site and with access to RWY 04/22. This conceptual development site could accommodate air cargo operations, aircraft maintenance and other aeronautical activities. The envisioned air cargo facility would have a large cargo ramp and is adjacent to other undeveloped land that could be used for a logistics company or manufacturer that requires air cargo services. Another advantage of the potential air cargo site at TXK is that it provides improved access to Interstate 40 for trucks transiting to and from the cargo facility.

**Exhibit 3.3  
Texarkana Regional Airport Infrastructure**



Source: Google Earth and Hubpoint

Any current air cargo operations (e.g., charter flights) can be accommodated on the north side of the airport in proximity to the existing passenger terminal. In this area TXK's fixed-base operator, Signature Flight, has a facility and ramp space. It is likely that Signature can handle smaller cargo charter aircraft, including ground handling and fueling services.

Finally, there is no current facility at TXK designated for handling belly cargo associated with commercial passenger aircraft. To date, this has not been an issue due to the types of regional jets operating at TXK and the small number of shipments handled in any given year. Should mainline narrowbody jets begin service at TXK, it's likely the volumes can be handled in areas around the passenger terminal. However, if belly cargo activity grows substantially, the Airport will need to be prepared to work with the airlines to determine a mutually beneficial solution.

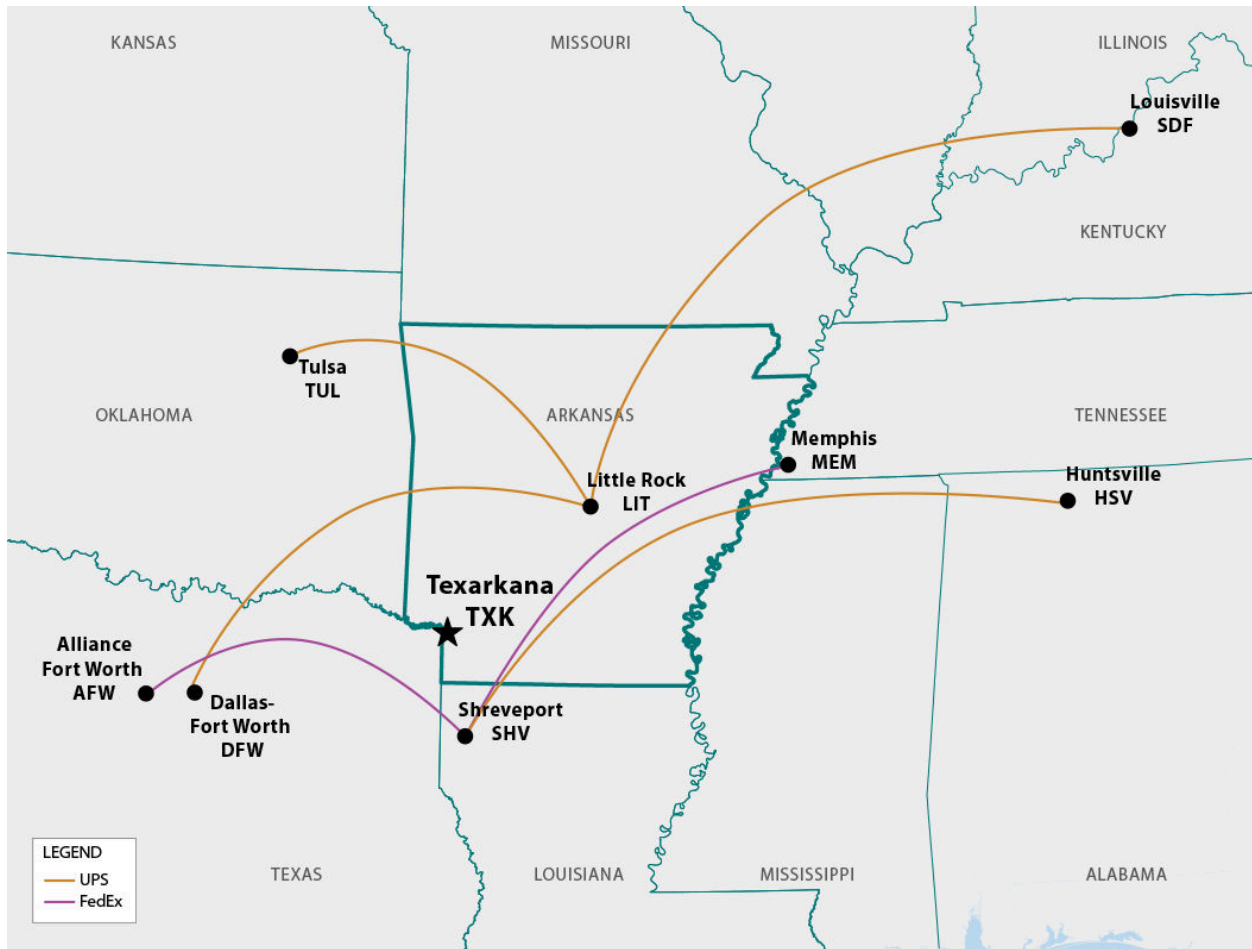
### 3.3 Air Cargo Operations at Nearby Airports

Because TXK does not have existing cargo operations and has little consistent cargo history, it is difficult to perform direct analysis of the market via publicly available data. However, by including nearby peer airports in the analysis, namely Shreveport Regional Airport (SHV) and the Bill and Hillary Clinton National Airport (LIT), it is possible to make observations on regional air cargo demand and trends in the market area relevant to TXK.

The primary air cargo routes operated at SHV and LIT are shown in **Exhibit 3.4**. SHV has regular service by both FedEx and UPS. LIT, on the other hand, is located just 2.0 hours away from the FedEx World Hub in Memphis via Interstate 40, so the only regular cargo flights are by UPS. As expected, SHV's main FedEx direct services are to hub airports in Memphis and Fort Worth. SHV also has direct service by UPS to Huntsville. LIT's direct UPS flights are to Louisville, Tulsa and Dallas-Fort Worth. Most UPS flights at SHV and LIT are operated with B757 freighter aircraft. FedEx flights on the SHV-MEM route are operated with A300 freighters and with turboprop aircraft on the SHV-AFW route. While these routes account for the majority of flight operations by the integrated express carriers at SHV and LIT, there are numerous other routes that operate on a seasonal or occasional basis during the year, depending on the needs of the carriers. Often, these other points of service are simply intermediary stops on the way between SHV and LIT and the major integrator hubs.



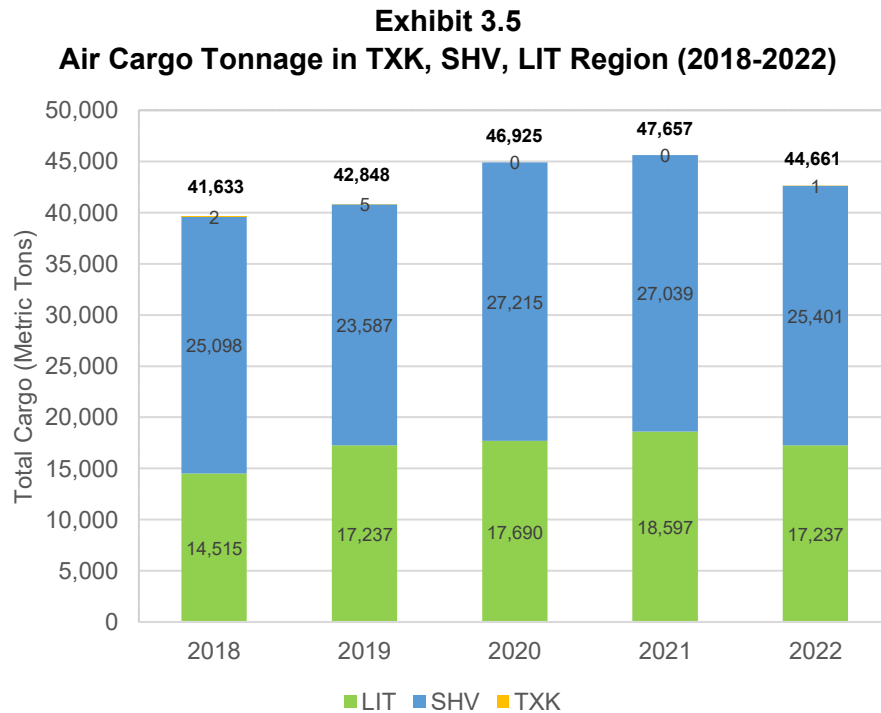
**Exhibit 3.4  
Primary Air Cargo Routes Operated by FedEx and UPS at Nearby Airports**



Source: Hubpoint analysis of U.S. DOT, T-100 Carrier Reports

In addition to the scheduled cargo services offered by FedEx and UPS, SHV and LIT frequently host charter cargo operations. These flights are operated by carriers typically serving the automotive market with flights to/from U.S. manufacturing centers in Michigan, Tennessee, Alabama and South Carolina as well as Mexican cities like Chihuahua, San Luis Potosi and Hermosillo. These charters tend to operate with smaller freighter aircraft, which can be readily handled by fixed-base operators at each airport.

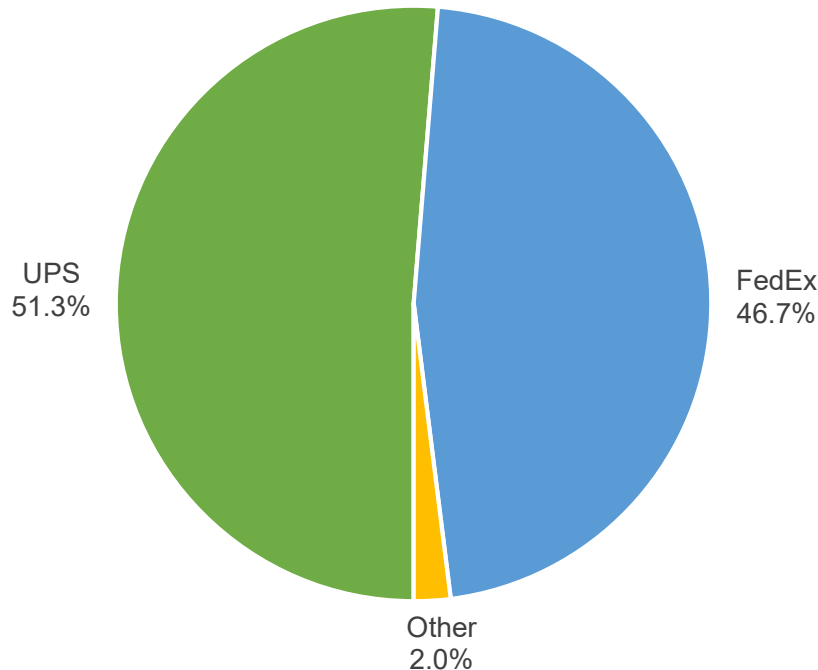
**Exhibit 3.5** shows air cargo levels at TXK, SHV and LIT between 2018 and 2022. In this 5-year period, air cargo tonnage for the three-airport region grew by 8% to 46,239 metric tons. This translates to a compound annual growth rate (CAGR) of just 1.9%, meaning the market is growing quite slow. It may also be reflective of cargo leakage away to other airports in the region that are larger than SHV and LIT. In aggregate, SHV accounts for 60% of the regional cargo tonnage, while LIT accounts for much of the remaining 40%.



Source: Hubpoint analysis of Airports Council International North America (ACI-NA) data.

Air cargo in the three-airport region (TXK, SHV, LIT) is largely carried by UPS and FedEx. See **Exhibit 3.6**. In 2022, these integrated express carriers accounted for 98% of the total air freight handled at the airports. With a 51% share of the regional cargo tonnage, UPS is the leading carrier, followed by FedEx with a 47% share. Both UPS and FedEx serve the U.S. domestic and international markets via their respective hub airports. Beyond the scheduled cargo services provided by the express carriers, Southwest Airlines and Delta Air Lines carry cargo at LIT while charter cargo carriers (e.g., IFL Group, Western Global, USA Jet) occasionally operate at both SHV and LIT.

**Exhibit 3.6**  
**Carrier Market Shares of Aggregate TXK, SHV, LIT Air Cargo Tonnage (2022)**

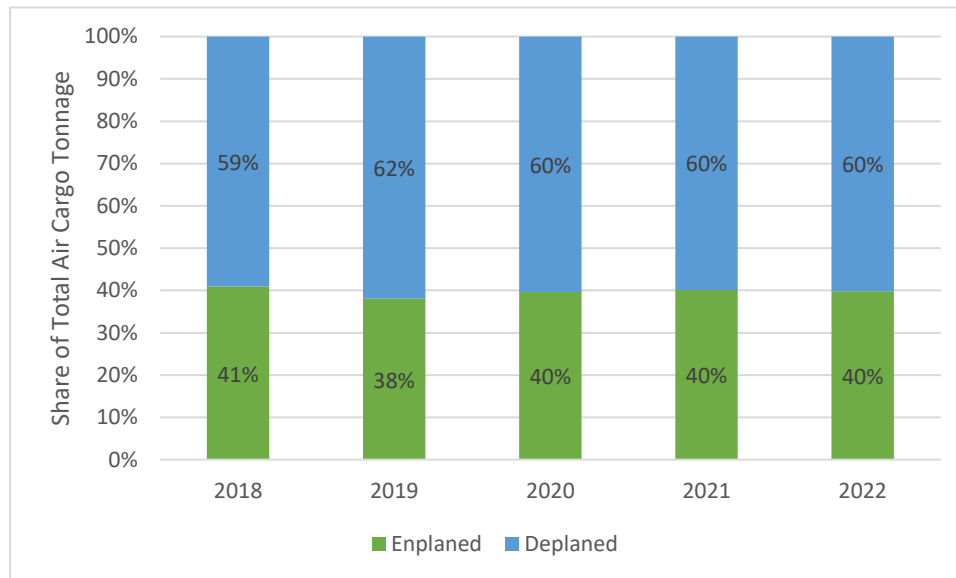


Source: Hubpoint analysis of U.S. DOT, T-100 Carrier Reports

From a directional perspective, inbound and outbound air cargo flows in the three-airport region (TXK, SHV, LIT) have traditionally skewed towards deplaned tonnage. During the 5-year period analyzed (2018-2022), deplaned (inbound) air cargo tonnage is consistently higher than outbound (enplaned) tonnage. As shown in **Exhibit 3.7**, inbound cargo represents 60% of total tonnage compared to outbound tonnage at 40%. Although these relationships varied somewhat in 2018 and 2019, since 2020, the split has remained steady. A possible explanation for the directional differential is that consumers are driving inbound air cargo up with e-commerce orders that consistently exceed outbound shipments of small packages and documents that are typically carried by integrated express carriers.

Importantly, these statistical observations of the TXK market were confirmed through interviews with various air cargo stakeholders in the Texarkana area. Stakeholders characterized TXK as a predominantly inbound market for air cargo and did not cite high levels of demand for outbound shipments. Air cargo operators generally prefer more balanced directional flows as that translates to higher utilization of assets leading to more efficient and profitable operations.

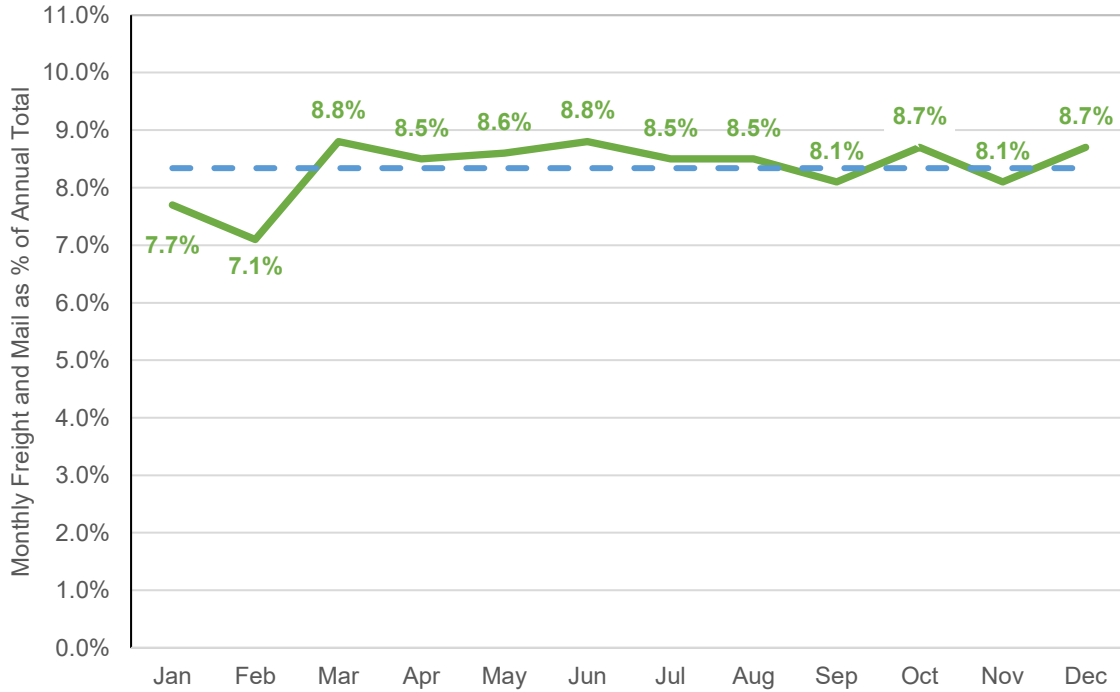
**Exhibit 3.7**  
**Aggregate TXK, SHV, LIT Air Cargo Tonnage by Direction (2018-2022)**



Source: Source: Hubpoint analysis of U.S. DOT, T-100 Carrier Reports

Seasonality of demand is another factor that airports consider when assessing their air cargo markets. The seasonal differences in cargo activity in the three-airport region (TXK, SHV, LIT) are typical of many U.S. markets. As shown in **Exhibit 3.8**, the regional market sees expected spikes in the Fourth Quarter. October and December account for 8.7% of total cargo in each month, when analyzing 2018-2022 data on an aggregated basis. Interestingly, March and June (at 8.8% of total cargo in each month) slightly exceed the October/December cargo activity levels. This compares to the pro rata average of 8.3% per month (represented in the exhibit with a blue dotted line). Air cargo volumes are lowest during February, when just 7.1% of the annual total is handled. With the increasing use of air shipments for e-commerce order fulfillment, a potential trend to track relates to returns of goods to retailers and manufacturers. In such cases, the month of January may begin to experience higher than normal levels of activity as returns are processed after the holiday season.

**Exhibit 3.8**  
**Seasonality for TXK, SHV, LIT Air Cargo Tonnage (2018-2022 aggregated)**



Source: Hubpoint analysis of U.S. DOT, T-100 Carrier Reports

While this analysis of the current situation for air cargo at TXK and relevant operations in the regional market is not ideal, it does provide important insights into the dynamics of the market. TXK is located between two airports with existing integrated express cargo services. This challenges TXK to define a unique market that cannot be well-served by nearby airports like SHV and LIT.

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## 4 REGIONAL MARKET OVERVIEW

In order to produce reliable development plans at the Texarkana Regional Airport, the relevant air cargo market must be defined and analyzed. Analysis is conducted via both primary and secondary research to obtain information about demand drivers, commodity flows and the market's future outlook. Traditional market research and historic data adds additional context to validate the primary research findings. Interviews with regional stakeholders are particularly useful due to the lack of transparency in the industry. Further, industry stakeholders offer granular details and forward-looking perspectives based on their own business activities in the region.

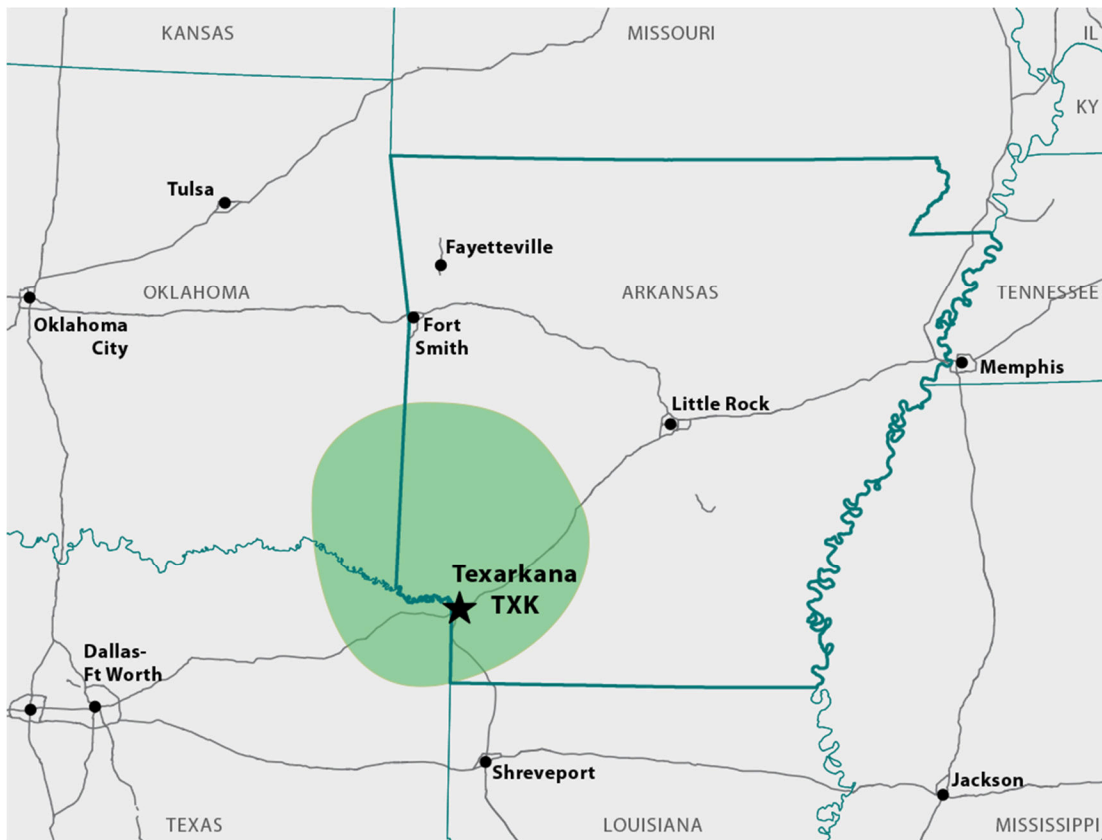
The objective of the analysis is to understand the market dynamics which then enables future demand estimates for air cargo services in the Texarkana region. Forecasts can then be developed with reasonable assumptions regarding TXK's potential air cargo activity levels. Finally, based on the TXK forecasts, plans for required cargo infrastructure and facilities can be formalized.

### 4.1 TXK Air Cargo Market Area Definition

Among other factors, air cargo market areas for airports are primarily defined by the availability of cargo air services, the distance between competing commercial airports and the ability to access markets from various airports via trucks. The market areas for airports are dynamic in nature depending on changes in the factors described above and the areas tend to not be mutually exclusive with overlapping borders. Given this situation, identifying the relevant market area for the Texarkana Regional Airport (or any airport) can be challenging and a mix of art and science. This is particularly true for TXK airports which has no existing air cargo services and little historic data to rely on.

Typically, defining an airport's current air cargo market area can be informed by the service areas of the current major cargo service providers (e.g., UPS, FedEx, DHL). These types of carriers are often able to provide inputs that can be used to establish reasonable boundaries for the airport's cargo market. Based on past projects for other small U.S. airports, Hubpoint has understood general parameters used by integrated carriers when establishing service areas around airports. All other things being equal, the Primary Market Area can often be considered an area around an airport ranging from a 1.0- to 2.0-hour drive time. Then, factors such as interstate highway access, rural / urban environments and distance to nearby commercial airports with cargo services are considered to potentially restrict or expand the drive time area in various directions. Employing this logic, the TXK Primary Air Cargo Market Area (assuming a domestic integrated carrier service) is shown in **Exhibit 4.1**. While this service area is not meant to be definitive, it is representative of the inputs obtained by the carriers themselves in other small airport markets.

**Exhibit 4.1  
TXK Primary Air Cargo Market Area**



Source: Hubpoint analysis

Traveling west from TXK brings cargo closer to the strong gravitational pull of the large Dallas-area airports. So, a shorter TXK reach to the west is assumed. SHV is less than a 1.5-hour drive time to the south and has existing services by FedEx and UPS. Therefore, the southern boundary of TXK’s market area is established at approximately the mid-point to SHV. Similarly, LIT is about a 2.0-hour drive to the northeast of TXK and the northeast boundary is assumed to reach the mid-point to LIT. Finally, the larger area directly north and northwest of TXK is devoid of air cargo services, so we assume a lengthier 2.5-hour drive time as the market area boundary reaching northward.

Again, this defined Primary Air Cargo Market Area for TXK is for a potential domestic integrated express service. Other types of potential cargo services at TXK may have different service areas depending on factors like markets served, flight frequency and aircraft size.

## 4.2 Demand Drivers in the Relevant Market Area

Demand for TXK air cargo services is driven by both business and consumer activity in the relevant market area. Businesses often ship and receive parts, finished goods, small packages and documents utilizing air transportation. Consumers often receive small packages shipped by air. Traditionally, air-eligible shipments tended to be high in value, relatively low in weight, and time-sensitive. While these descriptors are still generally applicable, e-commerce shipments break many of the traditional rules of air cargo. Still, air cargo is a premium-priced service with some limitations, making it more relevant to certain business and consumer shipments than others.

There are a variety of companies in the TXK air cargo market area which fit the profile of companies known to ship by air. These businesses relate to infrastructure maintenance, pharmaceuticals, healthcare, high-tech and electrical machinery. In interviews with local companies, it was confirmed that air cargo shipments at TXK commonly include e-commerce, machine and industrial parts, pharmaceuticals, medical supplies, biologics and tissue samples, electronics and documents. Information on the types of goods being shipped by all transportation modes is also helpful as it identifies core business activities in the region.

The 2017 Commodity Flow Survey administered by the Bureau of Transportation Statistics provides weight and value data for commodity shipments originating in Arkansas. **Exhibits 4.2 and 4.3** show that some of the top commodities shipping from Arkansas and Texas by value may have an air freight component. These include certain types of perishable foods, motor vehicle parts, electronics and pharmaceuticals.

**Exhibit 4.2**  
**Top Commodity Shipments Originating in Arkansas, Ranked by Value**

Commodity Description	Value (USD Millions)	Percent of Total
Mixed freight	\$13,881	12.11%
Meat, poultry, fish, seafood, and their preparations	\$12,809	11.17%
Machinery	\$7,889	6.88%
Motorized and other vehicles (includes parts)	\$6,545	5.71%
Base metal in primary or semi-finished forms and in finished basic shapes	\$6,474	5.65%
Plastics and rubber	\$5,818	5.07%
Other prepared foodstuffs and fats and oils	\$5,580	4.87%
Electronic and other electrical equipment and components, and office equipment	\$5,151	4.49%
Paper or paperboard articles	\$5,028	4.38%
Milled grain products and preparations, and bakery products	\$4,312	3.76%
<b>Top 10 commodities</b>	<b>\$73,487</b>	<b>64.1%</b>
Other commodities	\$41,182	35.9%
<b>Grand Total</b>	<b>\$114,669</b>	<b>100%</b>

Source: Bureau of Transportation Statistics, 2017 Commodity Flow Survey



**Exhibit 4.3**  
**Top Commodity Shipments Originating in Texas, Ranked by Value**

Commodity Description	Value (USD Millions)	Percent of Total
Gasoline and aviation turbine fuel	\$228,397	13.97%
Fuel oils	\$177,306	10.84%
Electronic and other electrical equipment and components, and office equipment	\$137,737	8.42%
Mixed freight	\$117,840	7.21%
Plastics and rubber	\$107,478	6.57%
Motorized and other vehicles (includes parts)	\$94,901	5.80%
Other coal and petroleum products	\$81,198	4.97%
Machinery	\$79,835	4.88%
Pharmaceutical products	\$76,933	4.70%
Basic chemicals	\$73,231	4.48%
<b>Top 10 commodities</b>	<b>\$1,174,856</b>	<b>71.8%</b>
Other commodities	\$460,434.00	28.2%
<b>Grand Total</b>	<b>\$1,635,290</b>	<b>100%</b>

Source: Bureau of Transportation Statistics, 2017 Commodity Flow Survey

On the other hand, top commodities shipping from Arkansas and Texas by weight shown in **Exhibits 4.4 and 4.5** are much more likely to be transported by railroads and trucks. Heavy, dense, lower value goods like agricultural products, minerals, oils and fuels are too bulky and dangerous for air transportation. Again, commodity descriptions such as these help to identify drivers of market activity and can signal if there are concentrations of air-eligible goods in a region.

**Exhibit 4.4**  
**Top Commodity Shipments Originating in Arkansas, Ranked by Weight**

Commodity Description	Tons (thousands)	Percent of Total
Gravel and crushed stone (excludes dolomite and slate)	22,671	20.94%
Wood products	10,576	9.77%
Non-metallic mineral products	7,857	7.26%
Base metal in primary, semi-finished forms in finished basic shapes	6,895	6.37%
Motorized and other vehicles (includes parts)	6,649	6.14%
Cereal grains (includes seed)	6,295	5.82%
Animal feed, eggs, honey, and other products of animal origin	5,076	4.69%
Meat, poultry, fish, seafood, and their preparations	4,774	4.41%
Mixed freight	4,483	4.14%
Agricultural products (excludes animal feed, cereal grains, and forage products)	4,397	4.06%
<b>Top 10 commodities</b>	<b>79,673</b>	<b>73.6%</b>
Other commodities	28,574	26.4%
<b>Grand Total</b>	<b>108,247</b>	<b>100.0%</b>

Source: Bureau of Transportation Statistics, 2017 Commodity Flow Survey

**Exhibit 4.5**  
**Top Commodity Shipments Originating in Texas, Ranked by Weight**

Commodity Description	Tons (thousands)	Percent of Total
Gasoline and aviation turbine fuel	436,531	23.51%
Fuel oils	351,195	18.91%
Other coal and petroleum products, not elsewhere classified	147,654	7.95%
Basic chemicals	133,538	7.19%
Non-metallic mineral products	130,917	7.05%
Gravel and crushed stone (excludes dolomite and slate)	119,434	6.43%
Natural sands	70,733	3.81%
Plastics and rubber	64,762	3.49%
Cereal grains (includes seed)	49,131	2.65%
Other prepared foodstuffs and fats and oils	38,888	2.09%
<b>Top 10 commodities</b>	<b>1,542,783</b>	<b>83.1%</b>
Other commodities	314,255	16.9%
<b>Grand Total</b>	<b>1,857,038</b>	<b>100.0%</b>

Source: Bureau of Transportation Statistics, 2017 Commodity Flow Survey

The Commodity Flow Survey also provides data on the transportation modes utilized by shippers located in Arkansas and Texas. Over 84% of the commodities transported from Arkansas and 68% from Texas, by value, exclusively used trucks. Air cargo accounted for just 1.6% of shipments from Arkansas and 3.7% from Texas, by value. Parcel, USPS and Courier modes include some movements by air, but the Commodity Flow Survey does not provide separate information on the air cargo component. It is important to note that the Truck mode likely has some air cargo value and weight embedded in its data. However, the survey's modal categories do not include "Truck and Air" under Multiple Modes. So, for instance, Arkansas air cargo moving by truck to airports in Texas are recorded in the Single Mode Truck category. **Exhibits 4.6 and 4.7** show that the majority of products from Arkansas and Texas are transported by modes other than air.

**Exhibit 4.6**  
**Weight and Value of Arkansas Freight Shipments by Transportation Mode**

Arkansas Transportation Mode	Weight		Value	
	Short Tons (Thousands)	Percent of Total	U.S. Dollars (Millions)	Percent of Total
<b>Single</b>				
Truck	118,617	83.5%	\$98,094	84.3%
Rail	12,091	8.5%	\$2,901	2.5%
Air (including truck and air)	12	0.0%	\$1,805	1.6%
<b>Multiple</b>				
Parcel, USPS, or courier	192	0.1%	\$7,375	6.3%
Truck and rail	6,874	4.8%	\$3,798	3.3%
Truck and water	556	0.4%	1,163	1.0%
Rail and water	7	0.0%	\$5	0.0%
<b>Other</b>				
Other Modes	3,714	2.6%	\$1,243	1.1%
<b>Total shipments (all modes)</b>	<b>142,063</b>	<b>100.0%</b>	<b>\$116,384</b>	<b>100.0%</b>

Source: Bureau of Transportation Statistics, 2017 Commodity Flow Survey

**Exhibit 4.7**  
**Weight and Value of Texas Freight Shipments by Transportation Mode**

Texas Transportation Mode	Weight		Value	
	Short Tons (Thousands)	Percent of Total	U.S. Dollars (Millions)	Percent of Total
<b>Single</b>				
Truck	1,262,218	67.9%	\$1,116,345	68.2%
Rail	71,402	3.8%	\$35,428	2.2%
Air (including truck and air)	698	0.0%	\$60,649	3.7%
<b>Multiple</b>				
Parcel, USPS, or courier	2,549	0.1%	\$133,846	8.2%
Truck and rail	70,577	3.8%	\$70,426	4.3%
Truck and water	10,626	0.6%	\$20,911	1.3%
Rail and water	3,996	0.2%	\$2,953	0.2%
<b>Other</b>				
Other Modes	438,175	23.6%	\$195,315	11.9%
<b>Total shipments (all modes)</b>	<b>1,860,241</b>	<b>100.0%</b>	<b>\$1,635,873</b>	<b>100.0%</b>

Source: Bureau of Transportation Statistics, 2017 Commodity Flow Survey

Independent research and guidance from the AR-TX REDI Regional Economic Development group identified several companies expected to have some level of demand for air cargo services. **Exhibit 4.8** below lists some of these local companies and their primary business activities. Even in this small sample, a diverse mix of businesses are represented. From interviews, it is also known that the usage of air cargo services varies widely within this group of companies, ranging from daily outbound shipments to sporadic use that may average a few small shipments per month. Importantly, no major shipper of air cargo (either inbound or outbound) was identified in the immediate Texarkana area. The region's industries tend to be related to heavy industry which is less relevant to air cargo demand. Still, these types of companies have periodic needs for air cargo services, even if for small package or document shipments.

**Exhibit 4.8**  
**Profiles of Select Texarkana Area Companies**

Company Name	Primary Business Activity	Location
Red River Army Depot	Army maintenance facility and military vehicle manufacturer	New Boston, TX
JCM Industries	Repair, connection & branching pipe fittings manufacturer	Nash, TX
FedEx Ground	Express service processing facility	Texarkana, AR
Cooper Tire	Tire and rubber manufacturer	Texarkana, AR
American Tire Distributor	Motor vehicle parts and supplies wholesalers	Texarkana, AR
CHRISTUS Health St. Michael Health System	Healthcare	Texarkana, TX
Wadley Regional Medical Center	Healthcare	Texarkana, TX
Pharma Nobis	Pharmaceutical products	Texarkana, TX
Domtar	Wood fiber-based paper and pulp product manufacturer	Ashdown, AR
Graphic Packaging International	Paperboard and pulp processing manufacturer	Queen City, TX
Abernathy Company	Janitorial and commercial cleaning solutions	Texarkana, AR
Raytheon	Defense contractor	East Camden, AR
Lockheed Martin	Global security and aerospace company	Texarkana, AR
BAE Systems	Combat vehicle parts	Texarkana, AR
Ledwell	Custom truck bodies, trailers and parts manufacturer	Texarkana, TX

As a further indicator of the types of activities that drive air cargo demand at TXK, the concentration of industries in Texarkana Metropolitan Statistical Area (MSA) was assessed. For the analysis, location quotients were calculated for more than 20 industries operating locally. Location quotients measure the relative employment levels for metropolitan areas by industry against national averages. A location quotient of 1.0 for a particular industry means that the industry’s regional employment level compared to overall employment is equal to that of the U.S. average. Location quotients greater than 1.0 indicate regional employment for an industry exceeds the U.S. average for that industry.

Certain industries are known to be correlated to air cargo demand, including Transportation and Warehousing. The Texarkana location quotient for Transportation and Warehousing is 1.02, meaning that Texarkana’s employment and activities in this sector are just slightly above the U.S. average. This signifies that the area is competent in these types of services, but not necessarily focused or specialized in this sector. Manufacturing was also just above the national average with a Location Quotient of 1.09. **Exhibit 4.9** below shows the location quotients for the Top 20 Industries in the Texarkana MSA.

**Exhibit 4.9**  
**Texarkana MSA Employment Concentration by Industry (2022)**

<b>Industry</b>	<b>Location Quotient</b>	<b>Total Employment (thousands)</b>
Federal Civilian Government	3.1	3.5
Farm	2.7	2.7
Forestry, Fishing, and Related Activities	1.5	0.6
Accommodation and Food Services	1.2	7.3
Retail Trade	1.2	8.8
State and Local Government	1.2	9.3
Health Care and Social Assistance	1.1	10.8
Utilities	1.1	0.3
Manufacturing	1.1	5.6
Mining	1.1	0.5
Other Services, except Public Administration	1.1	4.8
Transportation and Warehousing	1.0	3.8
Wholesale Trade	1.0	2.4
Construction	1.0	4.2
Administrative and Waste Services	0.9	4.4
Finance and Insurance	0.7	3.1
Real Estate, Rental and Lease	0.7	2.7
Management of Companies and Enterprises	0.7	0.7
Federal Military	0.5	0.4
Arts, Entertainment, and Recreation	0.5	0.9
<b>Top 20 Total</b>		<b>76.9</b>
Other		3.3
<b>Total</b>		<b>80.1</b>

Source: Hubpoint analysis of Woods & Poole Economics data

Some of the largest employers in Texarkana are in the logistics sector, including Southern Refrigerated Transport, and DLA Distribution. Further, there are indications of strengthening transportation, warehousing, and logistics activity in the Texarkana area, including the 2019 expansion of the FedEx Freight center, the 2022 expansion of the XPO Logistics LTL terminal, and the new Southeastern Freight Lines Texarkana service center. Some local manufacturing plants are also expanding which should have a corresponding positive impact on logistics activities. The qualifier is that these developments appear to be mostly relevant to the trucking industry versus the air cargo industry.

### 4.3 Arkansas International Air Cargo

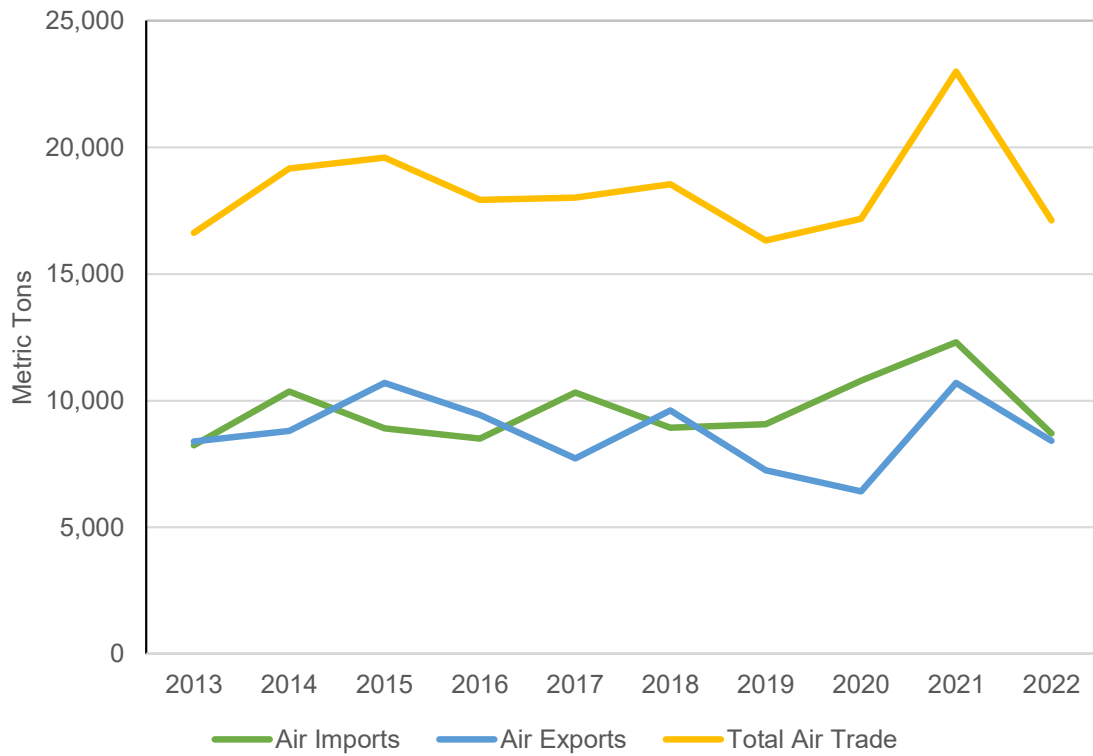
An important component of air cargo is international trade between the U.S. and foreign countries. While the majority of international cargo travels by truck to large gateway airports, significant volumes also move on integrated express carriers via their U.S. hub airports with origins and destinations at spoke airports within their networks. Further, as discussed in Chapter 2, there are industry trends suggesting that smaller airports are becoming more relevant to international air cargo services. In this manner, international cargo can be viewed as a driver of demand and activity at TXK.

International air trade statistics are reported by the U.S. Census Bureau's Foreign Trade Division offering very good information on air imports and exports on a U.S. state and foreign country basis. For air trade, it is possible to analyze Arkansas's international commodities, foreign trading partners and shipment volumes by both weight and value on a monthly basis. This complements the Commodity Flow Survey data by providing even more detail on TXK's air cargo market reported at regular intervals and allowing for meaningful trend analysis.

Between 2013 and 2020, Arkansas's international trade was fairly stable, maintaining fairly tight range of tonnage levels. In fact, the difference between the 2013 start and 2020 end data points was less than 500 metric tons. However, Arkansas's international air trade (measured in metric tons) grew substantially between 2020 and 2021 at 34%. This growth was quickly lost when, in 2022, trade levels dropped by 25%. See **Exhibit 4.10**.

In 2021, both air imports and exports for Arkansas grew quickly, but air exports had dropped quickly in 2020, so the level achieved in 2021 seems to have included recovery to the norm and then additional net new growth. By 2022, imports and exports ended at approximately the same tonnage. A review of the commodities traded in each direction provides valuable insight of what caused the initial tonnage increase and the subsequent decrease. For air imports, it appears that a large increase in computers caused much of the 2021 change which was then followed by a large decrease in 2022. This would correlate well with the pandemic trend of people staying home and needing computers for work and school. For air exports, Arkansas's trade in plastics almost tripled from 2020 to 2021, then fell over 20% in 2022 as the market normalized.

**Exhibit 4.10**  
**Arkansas Air Trade Trends (CY 2013-2022)**



Source: Hubpoint analysis of U.S. Census Bureau, Foreign Trade Statistics

Commodity detail for Arkansas’s 2022 air imports and exports are provided in **Exhibits 4.11 and 4.12**. Air imports are dominated by traditional air cargo commodities like industrial machinery, computers, electric machinery and medical instruments, representing nearly 46% of the state’s total air import weight. Air exports are somewhat more diversified led by plastics, computers and electrical machinery representing 54% of total exports.



**Exhibit 4.11**  
**Arkansas Top Air Imports by Weight (2022)**

Rank	Commodity	Air Weight (Metric Tons)	% Share of Total
1	Industrial Machinery, Including Computers	2,461	28.3%
2	Electric Machinery; Sound and TV Equipment; Parts	784	9.0%
3	Optical, Photographic, Medical Instruments	753	8.6%
4	Clocks, Watches and Parts	645	7.4%
5	Plastics	493	5.7%
6	Arms And Ammunition; Parts And Accessories	489	5.6%
7	Vehicles, Except Rail or Tram, and Parts	439	5.0%
8	Special Classification Provisions	216	2.5%
9	Headgear and Parts	206	2.4%
10	Footwear, Gaiters, and Parts	182	2.1%
	All Other	2,038	23.4%
	<b>Total Arkansas Air Imports</b>	<b>8,706</b>	<b>100.0%</b>

Source: Hubpoint analysis of U.S. Census Bureau, Foreign Trade Statistics, CY 2022

**Exhibit 4.12**  
**Arkansas Top Air Exports by Weight (2022)**

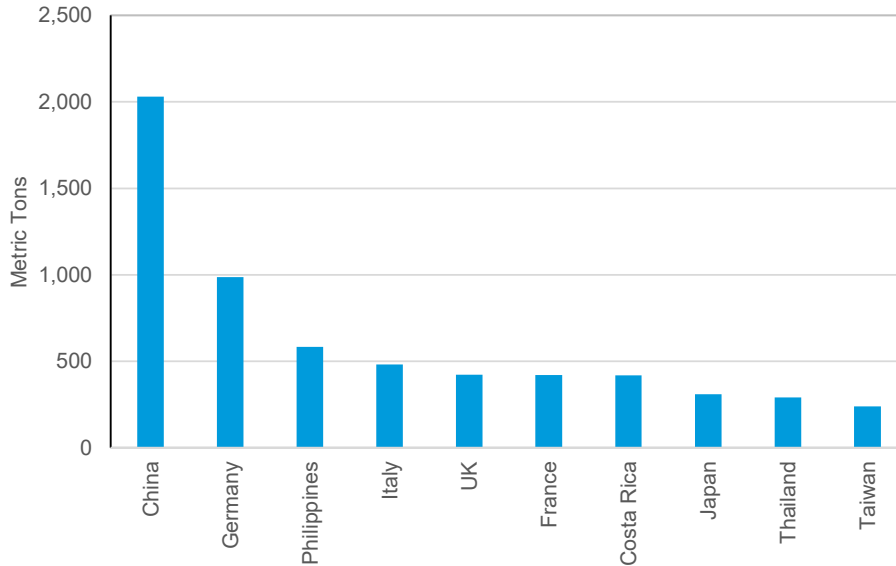
Rank	Commodity	Air Weight (Metric Tons)	% Share of Total
1	Plastics	2,710	32.2%
2	Industrial Machinery, Including Computers	993	11.8%
3	Electric Machinery; Sound and TV Equipment; Parts	853	10.1%
4	Aluminum and Articles	346	4.1%
5	Vehicles, Except Rail or Tram, and Parts	297	3.5%
6	Aircraft, Spacecraft, And Parts	292	3.5%
7	Articles of Iron Or Steel	231	2.7%
8	Paper & Paperboard & Articles (Inc Papr Pulp Artl)	212	2.5%
9	Tools, Cutlery of Base Metal and Parts	209	2.5%
10	Dairy Prods, Bird Eggs, Honey	195	2.3%
	All Other	2,073	24.6%
	<b>Total Arkansas Air Exports</b>	<b>8,411</b>	<b>100.0%</b>

Source: Hubpoint analysis of U.S. Census Bureau, Foreign Trade Statistics, CY 2022

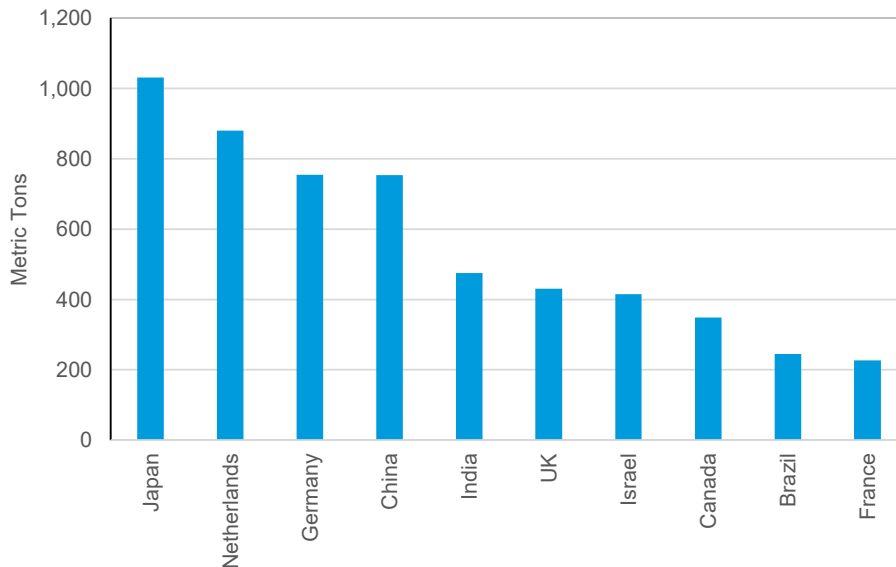
For decades, the leading country for U.S. air imports has been China and, therefore, it is to be expected that China is also Arkansas's top trading partner, by far, for air imports. Other leading countries for Arkansas imports, are located in Europe, Asia and Central America. Arkansas's top trading partners for air exports include Japan, The Netherlands, Germany and China. Notably, both air imports and exports include a diverse set of geographies. No single world

region appears to be overrepresented for trade with Arkansas which may lead to general stability over time. See Exhibits 4.13 and 4.14.

**Exhibit 4.13**  
**Arkansas Air Imports by Country – CY 2022**



**Exhibit 4.14**  
**Arkansas Air Exports by Country – CY 2021**

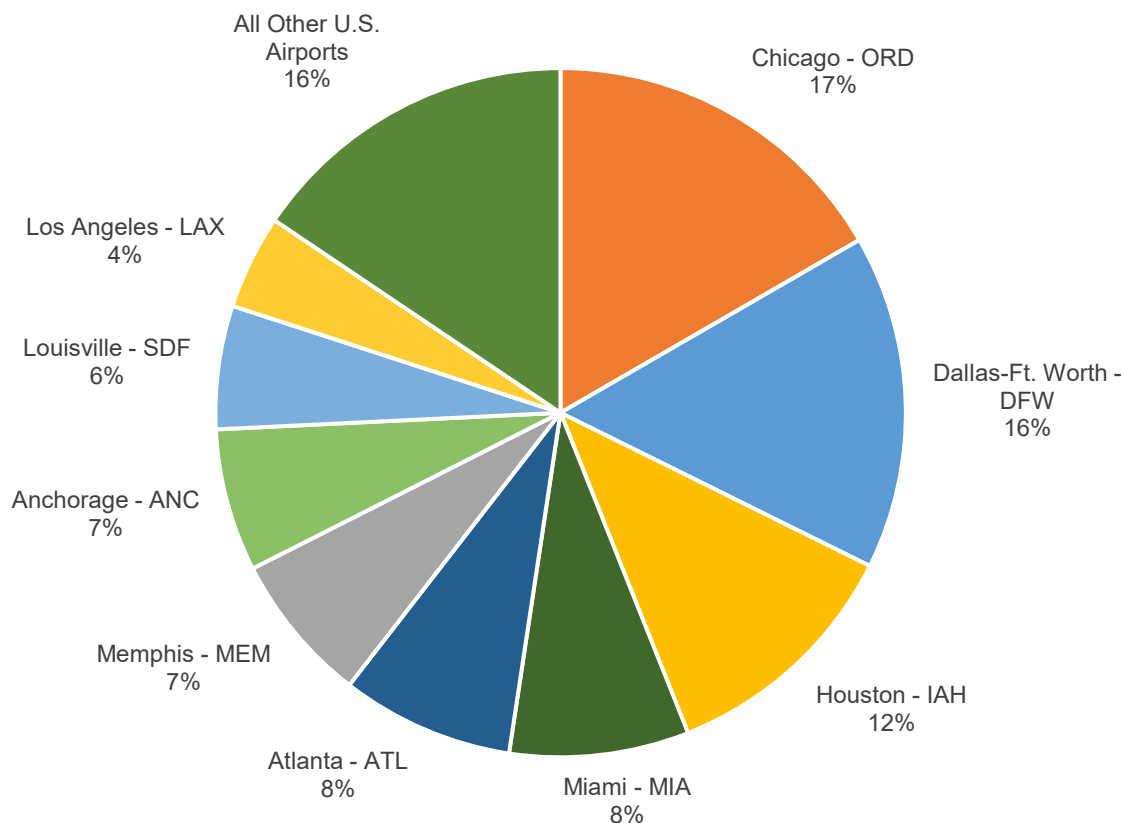


Source: Hubpoint analysis of U.S. Census Bureau, Foreign Trade Statistics, CY 2022

The Census Bureau’s Foreign Trade data also provides information on the routings of Arkansas’s imports and exports. For each state, data is available on the last U.S. airport utilized for outbound international shipments (U.S. airport of exit) as well as the first U.S. airport for inbound international shipments (U.S. airport of entry). **Exhibit 4.15** shows the distribution of Arkansas’s international air trade (imports and exports combined) in 2022 by airport of entry/exit. In many cases, there is a single dominant airport that handles a large share of a state’s international shipments. For example, international air trade for many states in the Western U.S. tend to flow primarily over Los Angeles International Airport. Similarly, Midwestern states’ trade routings usually flow via Chicago O’Hare International Airport.

For Arkansas, there is much more fragmentation and an absence of a single major gateway airport handling the state’s international air trade. ORD, DFW and IAH are all represented at similar levels. The next five airports of entry/exit only vary by a 2% share of Arkansas’s total trade volume. Further, large Eastern gateway airports like ATL and MIA are listed along with LAX. This dynamic confirms what was observed in the prior exhibits - that Arkansas has a very diverse group of international trading partners and the state has many choices as to how it ships to/from other countries.

**Exhibit 4.15**  
**Arkansas Air Imports / Exports by Airport of Entry / Exit (CY 2022)**



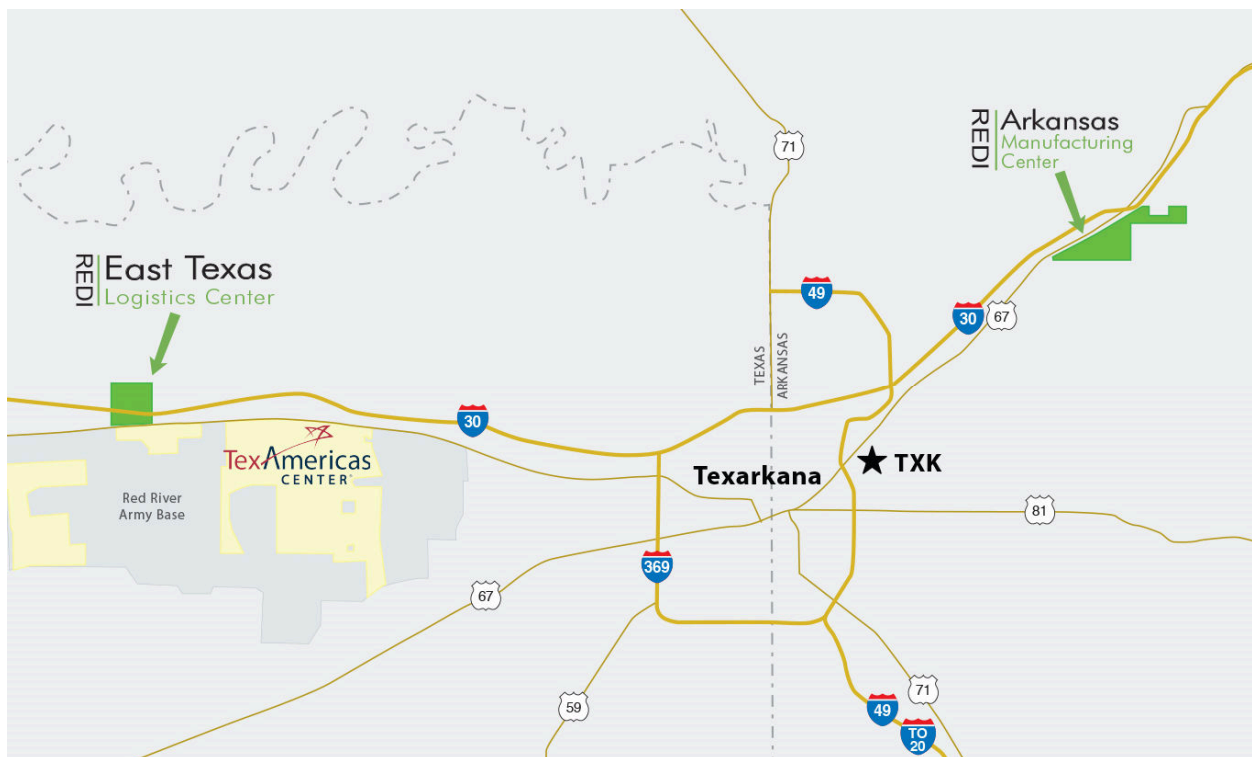
Source: Hubpoint analysis of U.S. Census Bureau, Foreign Trade Statistics, CY 2022

#### 4.4 Market Outlook

After obtaining input from local stakeholders and conducting other research, it is clear that TXK’s relevant air cargo market is characterized as overall stable and slow growing. Domestic and international air cargo shipments have remained in a very tight range over many years. One interpretation of this situation is that the companies located in the area simply do not produce or require the types of goods typically shipped by air at a high level. Given this environment, it seems that the TXK air cargo market will be highly reliant on continued regional economic development activities to attract the types of industries and companies that drive demand for air cargo.

Economic development relates to factors like business growth, expansion and retention in the TXK market area as well as demographic changes like population and income growth. Importantly, the types of businesses operating in the market will be critical to improving the outlook for air cargo. Of particular note are the existing logistics and manufacturing centers in close proximity to the Texarkana Regional Airport. See **Exhibit 4.16**.

**Exhibit 4.16**  
**Logistics and Manufacturing Centers with Proximity to TXK**



Source: AR-TX REDI, Regional Economic Development, Inc. and Hubpoint

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These developments include the East Texas Logistics Center and the Arkansas Manufacturing Center. Depending on the ultimate tenants and activities at these facilities, there may be significant future interactions with TXK and its air cargo operators.

- The East Texas Logistics Center is located in Bowie County, TX and includes 847 total acres on two parcels separated by Interstate 30. The Logistics Center is close to the TexAmericas Center as well as the Red River Army Base. It is part of a Free Trade Zone and is only 21 miles from TXK.
- The Arkansas Manufacturing Center is located in Miller County, Arkansas and includes a 1,350-acre site that is adjacent to Interstate 30. The Manufacturing Center is less than 8 miles from TXK and is also adjacent to the Union Pacific rail line. It is considered a shovel-ready megasite and has drawn interest from numerous original equipment manufacturers (OEMs). This site is well-suited to an automotive manufacturing plant. Attraction of this type of plant could immediately impact TXK's cargo business as the automobile industry is one of the heaviest users of air cargo services.

The presence of these attractive sites close to TXK is potentially advantageous for all parties, but it does not guarantee that increasing amounts of air cargo demand will be generated in the Texarkana area. However, it certainly increases the likelihood of that happening at some point. Logistics companies tend to cluster near each other and, in doing so, the breadth and depth of their services naturally expand – to include activities that require air transportation. From that standpoint, the close proximity to TXK of these logistics and manufacturing centers should be mutually beneficial for the tenants and the Airport.

## 5 COMPETITIVE AIRPORTS

Understanding the competitive environment for the Texarkana Regional Airport is important because air cargo typically moves long distances by truck to airports well away from the initial origin or ultimate destination of a shipment. This is especially true for international shipments where the ground movements are a minor portion of the overall journey, but, depending on the type of shipment, this practice can occur in the U.S. domestic market as well. As a result of this dynamic, the catchment area for cargo is often larger and includes more competitive airports than would typically be considered for passenger travel.

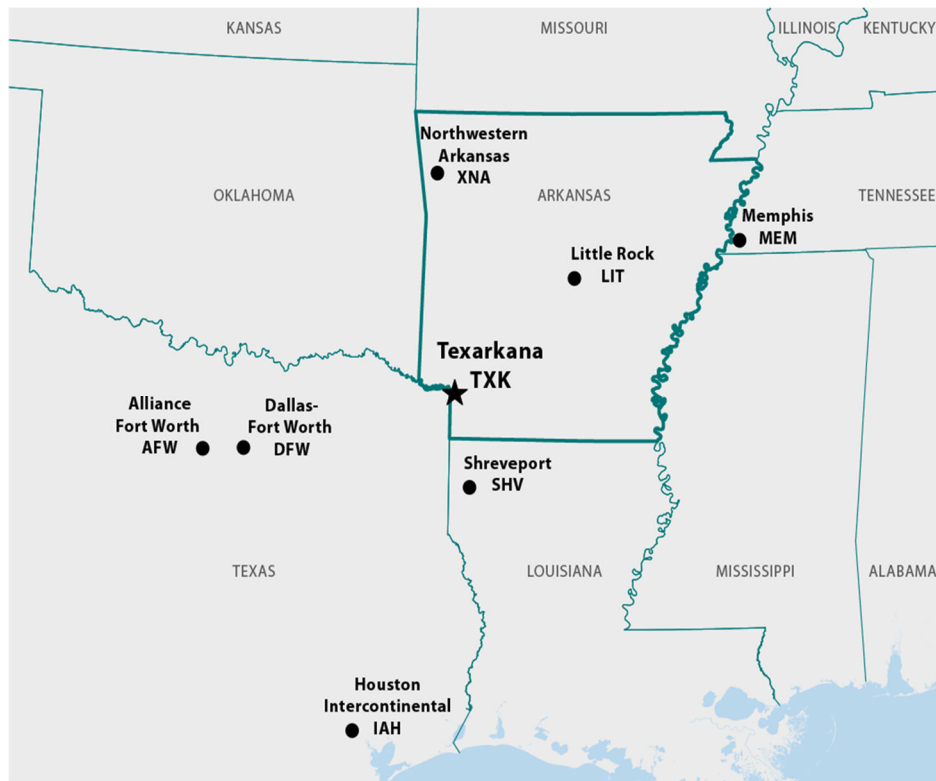
At many U.S. airports, FedEx and UPS provide excellent services and timely access to markets across the country and around the world. Further, the integrated express services are homogeneous at most airports, thereby making the closest airport the most likely choice for shippers. However, for general cargo, involving many different stakeholders (e.g., freight forwarders, ground handlers, trucking companies, airlines and warehouse operators), decisions for choosing airports are much more complex and can vary widely based on critical factors like pricing, timing and reliability.

For this Study, the following airports were included in the competitive analysis:

1. Shreveport Regional Airport (SHV)
2. Dallas - Fort Worth International Airport (DFW)
3. Fort Worth Alliance Airport (AFW)
4. Houston George W. Bush Intercontinental (IAH)
5. Memphis International Airport (MEM)
6. Little Rock Bill and Hillary Clinton National Airport (LIT)
7. Northwest Arkansas National Airport (XNA)

The competitive analysis is meant to provide TXK with a perspective on how it is positioned relative to other airports in a broad region. Each airport is profiled in terms of its location, accessibility, cargo air services, facilities, infrastructure and cargo volumes. A map of the airports reviewed is shown in **Exhibit 5.1**.

**Exhibit 5.1  
Airports Reviewed for TXK Competitive Analysis**



Source: Hubpoint analysis

**5.1 Shreveport Regional Airport (SHV)**

The Shreveport Regional Airport (SHV) is an FAA primary non-hub airport located 4 miles west of Downtown Shreveport, 80 south of TXK via I-49, and covers 1,625 acres. Interstates I-20 and I-220, which connect to I-49 north and south of Shreveport, intersect at SHV. It is also served by rail, and Shreveport has water ports along the Red River and the Port of Shreveport-Bossier (approximately 20 miles from SHV). Shreveport Regional Airport is recognized as the second busiest air cargo airport in the State of Louisiana. SHV has daily service through FedEx, UPS operating Airbus wide-body and Boeing aircraft, and regional cargo carrier Mountain Air Cargo operating ATR-72 aircraft.

The Shreveport-Bossier City, LA MSA includes a 2022 population of 390,523 (2.6 times the size of the Texarkana MSA) with a gross regional product of \$18.7 billion (3.5 times the size of the Texarkana MSA) and GDP per capita of \$47,858 (+32% vs. Texarkana MSA).

SHV has two runways, including one at 8,351 feet that is capable of handling domestic wide-body flights. The Shreveport Airport Authority has two air cargo buildings in the certified industrial park, Air Cargo West, totaling 56,000 square feet. Tenants for the buildings include

FedEx, UPS, Mountain Air Cargo, and Worldwide Flight Services. Ground-freight forwarders seeking warehouse and office space have the East Cargo complex with 40,000 square feet or Air Cargo West with another 16,000+ square feet. Shreveport Regional has an FTZ where foreign goods may be brought in without formal customs entry or the payment of duty and excise taxes until and unless they leave the FTZ and enter the U.S. Testing, repackaging, inspections, and further processing can also be conducted within the FTZ. A U.S. Customs Port of Entry office is located at the Airport.

In 2022, SHV ranked 94<sup>th</sup> among North American airports in air cargo tonnage according to ACI-NA data, with 25,401 metric tons of domestic freight.

## **5.2 Dallas/Fort Worth International Airport (DFW)**

The Dallas/Fort Worth International Airport (DFW) is an FAA large hub airport located 12 miles northwest of Dallas, northeast of Fort Worth, and 197 miles west of TXK via I-30. DFW covers more than 26.9 square miles, with real property of 17,207 acres. DFW has convenient access to I-35, I-820, I-20, I-45, and I-30.

The Dallas-Fort Worth-Arlington, TX MSA includes a 2022 population of 7.8 million (53 times the size of Texarkana MSA) with a gross regional product of \$528.5 billion (99 times the size of the Texarkana MSA) and a GDP per capita of \$67,116 (+85% vs. Texarkana MSA).

DFW has seven runways, including four at over 13,000 feet, capable of handling any type of aircraft. Over 60 percent of all air cargo in the state of Texas is handled through DFW by connecting to key markets throughout the Americas, Asia, Middle East, and Europe. There are more than 20 million square feet of cargo and warehouse facilities on and surrounding the airport, including an airside cold chain facility with two dedicated pharma chambers, and 4.5 million square feet of cargo apron space. DFW has an on-airport Foreign Trade Zone of 2,400 acres. Amazon has five distribution facilities totaling about 5 million square feet at the airport.

To ease constraints and develop facilities to meet strong air cargo demand, DFW announced plans in January 2022 for more airside cargo facilities and freighter aircraft parking spaces. Plans to redevelop an airside area on the Airport's west side include two state-of-the-art cargo facilities totaling approximately 300,000 square feet, eight new Category 6 aircraft parking positions with hydrant fueling, and an additional taxi lane for added flexibility during peak times.

In 2022, DFW ranked 10<sup>th</sup> among North American airports in air cargo tonnage according to ACI-NA data, with over 330,000 metric tons of international freight, 430,000 metric tons of domestic freight and 53,000 metric tons of mail.

## **5.3 Fort Worth Alliance Airport (AFW)**

The Fort Worth Alliance Airport (AFW) is a general aviation airport located 13 miles north of Fort Worth, TX, and 220 miles from Texarkana (TXK) via I-635 and I-30, and covers 1,198 acres. AFW has convenient access to I-35, I-30, I-20, and I-45.



The Dallas-Fort Worth-Arlington, TX MSA includes a 2022 population of 7.8 million (53 times the size of Texarkana MSA) with a gross regional product of \$528.5 billion (99 times the size of the Texarkana MSA) and a GDP per capita of \$67,116 (+85% vs. Texarkana MSA).

In 2018, AFW completed expansion of their runways from 8,200 feet and 9,600 feet to two 11,000-foot runways capable of supporting fully-laden cargo flights as far as Europe. The airport has 1.3 million square feet of cargo apron space with over 1.3 million square feet of on-ramp cargo structures. Alliance is home to FedEx's Southwest Regional Sort Hub which is the third largest in the U.S. in terms of square footage. AFW is one of the regional air hubs for Amazon Air, with the air hub on airport and three fulfillment centers and warehouses in the adjacent industrial development. AFW is a component of the larger public-private partnership forming the 27,000-acre AllianceTexas development, which includes a 9,600-acre business park. Surrounding development also includes the BNSF Alliance Intermodal Facility, a UPS Ground Sort Hub, Walmart eCommerce Center and Walmart Fulfillment Center, JC Penney Distribution Logistics Center, Kraft Foods, Callaway Golf, Michael's, Harbor Freight, Dollar General, LG, and Verizon distribution centers.

AFW is part of the AllianceTexas Mobility and Innovation Zone focusing on innovative supply chain solutions, including autonomous and automated movement of goods. AFW has an FTZ.

Alliance is ranked 22<sup>nd</sup> among North American airports in air cargo tonnage according to 2022 ACI-NA data, with over 377,000 metric tons of domestic freight. This volume represented a 1.6% increase over the 2021 level.

#### **5.4 Houston George W. Bush Intercontinental (IAH)**

The Houston George W. Intercontinental Airport (IAH) is an FAA Large hub located 15 miles from Houston and 280 miles to TXK via I-69/US-59, and covers more than 11,000 acres. IAH has convenient access to I-45 and I-10.

The Houston-The Woodlands-Sugar Land, TX MSA has a population of 7.3 million (49.6 times the size of Texarkana MSA) with a gross regional product of \$485 billion (91 times the size of the Texarkana MSA) and a GDP per capital of \$66,383 (+83% vs the Texarkana MSA).

IAH has five runways, two of which are 10,000 feet and one at 12,000 feet which can handle Group V aircraft including Boeing 777-200 and 747-400. The airport has two cargo facility areas that are approximately 1 million square feet and over 3 million square feet of cargo apron space with parking for 20 wide-body aircraft. IAH specializes in the handling of machinery and equipment for the energy, aerospace, and construction sectors. IAH has a perishable goods handling facility next to the tarmac.

In 2022, IAH ranked 16<sup>th</sup> among North American airports in air cargo tonnage according to ACI-NA data, with over 200,000 metric tons of international freight, 318,000 metric tons of domestic freight, and 24,000 metric tons of mail.

## 5.5 Memphis International Airport (MEM)

The Memphis International Airport (MEM) is an FAA medium hub located 3 miles south of Memphis and 275 miles northeast of TXK via I-30 and I-40, and covers 3,900 acres. MEM also has convenient access to I-55, I-22, and US 51 which becomes I-69 at the Kentucky border.

The Memphis TN-MS-AR MSA has a population of 1.3 million (9 times the size of Texarkana MSA) with a gross regional product of \$72.3 billion (13.5 times the size of the Texarkana MSA) and a GDP per capita of \$53,830 (+49% vs. the Texarkana MSA).

MEM has four runways, including one at 11,120 feet, capable of supporting fully-laden cargo flights as far as Europe. The airport has over 36,000 million square feet of cargo warehouse space and 1.4 million square feet of cargo apron space at Cargo East. In addition, MEM is the FedEx World Hub, which leases 34 million square feet of space on airport property and accounts for almost 400 flights per day. UPS facilities are currently 293,000 square feet but expansion will increase it to 424,000 square feet.

In 2022, MEM ranked 1<sup>st</sup> among North American airports in air cargo tonnage according to ACI-NA data, with over 665,000 metric tons of international freight, 3.4 million metric tons of domestic freight, and 10,000 metric tons of mail. Overall, total cargo at MEM was down 9.8% compared to 2021.

## 5.6 Little Rock Bill and Hillary Clinton National Airport (LIT)

The Little Rock Bill and Hillary Clinton National Airport (LIT) is an FAA small hub airport located 2 miles east of the Little Rock business district, 140 miles northeast of TXK via I-30, and covers over 2,200 acres. LIT also has convenient access to I-40.

The Little Rock-North Little Rock-Conway, AR MSA includes a population of 756,767 (5 times the size of the Texarkana MSA) with a gross regional product of \$36.7 billion (6.9 times the size of the Texarkana MSA) and GDP per capita of \$48,518 (+34% vs Texarkana MSA).

LIT has three runways, including two at over 8,200 feet, capable of handling domestic wide-body flights. The airport has 78,000 square feet of cargo warehouse space and 315,000 square feet of cargo apron space. There is a large 1 million square foot Dassault Aircraft facility on the airport, including the Completion Center where all Falcon jets are flown in and optional avionics and the interiors are installed, and the Services facility for inspection, maintenance, and repair.

In 2022, LIT ranked 106<sup>th</sup> among North American airports in air cargo tonnage according to ACI-NA data, with more than 17,000 metric tons of domestic freight.

## 5.7 Northwest Arkansas National Airport (XNA)

The Northwest Arkansas National Airport (XNA) is an FAA small hub airport located 12 miles from the Bentonville, AR central business district, 250 miles north of TXK via I-49 and US 71, and covers 2,400 acres. XNA has easy access to I-49 to Fort Smith (and I-40 to Oklahoma City, Little Rock and Memphis) to the south and Joplin MO (and I-44 to Oklahoma City and St Louis), and Kansas City to the north.

The Fayetteville-Springdale-Rogers, AR MSA includes a population of 570,120 (3.9 times the size of the Texarkana MSA) with a gross regional product of \$28.1 billion (5.3 times the size of the Texarkana MSA) and GDP per capita of \$49,209 (+36% vs Texarkana MSA)

XNA has one runway at over 8,800 feet capable of handling domestic widebody flights, and taxiway/alternate landing surface (ALS 17-35) at 8,800 feet long. XNA has 200,000 square feet of cargo apron with space for facilities, but currently does not have dedicated cargo buildings. Two 58,000 square feet hangars are leased by King Aerospace for modifications to government or quasi-government widebody aircraft. In 2022, XNA purchased additional land and has allocated additional funds to complete land purchases needed for a planned second runway when and if it is needed.

In 2022, XNA ranked 173<sup>rd</sup> among North American airports in air cargo tonnage according to ACI-NA data, with 26 metric tons of domestic freight.

XNA has recently completed a cargo feasibility study and is designing a potential new access road to help attract cargo carriers such as FedEx and UPS.

## 5.8 Summary

A competitive review for the Texarkana Regional Airport includes seven airports with varying levels of air cargo volumes capabilities and relevance to TXK. Exhibit 5.2. summarizes key cargo and demographic metrics for these airports and their communities. Shreveport Regional Airport is the closest commercial airport to TXK and is approximately a 1.5-hour drive from Texarkana. Both FedEx and UPS operate flights at SHV which attract cargo from the Texarkana area. In interviews for this Study, SHV was frequently mentioned as an airport where air cargo services could be conveniently accessed. Meanwhile, Dallas-Fort Worth International Airport is approximately 3 hours from Texarkana via I-30 and has numerous all-cargo and passenger flights that can efficiently transport cargo to/from the surrounding region.

Although TXK does not currently have air cargo services, consumers and businesses in the Texarkana area have viable options at nearby airports for inbound and outbound air shipments. With SHV to the south, LIT to the northeast and DFW to the west, air cargo carriers are able to efficiently serve Texarkana via trucks that link to air services at these airports. Given this situation, it may be necessary for a large manufacturer or distributor of air-eligible goods to locate in the immediate Texarkana area to attract the attention of cargo airlines and to consider direct service at TXK.

**Exhibit 5.2**  
**Competitive Airport Summary**

Airport	Cargo - Metric Tons (2022)	Est'd Cargo Facilities (Sq. Ft.)	MSA Population (2022)	GRP (billions USD)
MEM	4,042,679	36,000,000	1,300,000	\$72.3
DFW	818,933	20,000,000	7,800,000	\$528.5
IAH	542,072	1,000,000	7,300,000	\$485.0
AFW	377,389	1,300,000	7,800,000	\$528.5
LIT	17,237	125,000	961,919	\$60.9
SHV	25,401	56,000	390,523	\$18.7
XNA	26	200,000	570,000	\$28.1

Source: Hubpoint analysis of ACI-NA data, Woods & Poole Economics data 2022, Google Earth

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## 6 ASSESSMENT OF SELECT U.S. AIR CARGO OPERATORS

### 6.1 Introduction

Even with industry trends toward use of alternative airports, for most small U.S. airports there is a short list of relevant cargo carriers that will regularly operate at their facilities. This list includes the U.S. integrated express carriers FedEx and UPS, foreign integrated express carrier DHL, and e-commerce carrier Amazon Air. Each of these carriers have some similarities to one another as well as some key differences. A brief overview of each air carrier is provided below along with assessments of their current strategies and relevance to TXK.

### 6.2 FedEx Express

FedEx Express is one of many units of FedEx Corporation and is primarily responsible for operating the air transportation division. It serves over 650 airports worldwide with a fleet consisting of over 400 large jets and almost 300 smaller turboprop feeder aircraft. In the U.S., FedEx Express operates a Superhub in Memphis and several regional hubs, including the Southwest Hub at Fort Worth Alliance Airport.

FedEx Corporation is currently in the early stages of a massive restructuring which will bring FedEx Express, FedEx Ground and several other operating companies into a single combined company. The consolidated company is meant to simplify customer experiences, improve efficiencies, lower costs and increase profitability.

Previously, FedEx had announced reductions in its flight operations as part of a cost-cutting strategy. Under the new structure, the company is expected to place more emphasis on moving more packages on trucks and less on airplanes. It is likely that many airports will experience decreased flight activity by FedEx Express and some airports may lose service completely. FedEx airports within close proximity of each other could see services combined at fewer airports. In this environment, it would be difficult to envision FedEx adding new U.S. airports to its network. TXK is located less than a 1.5-hour drive from FedEx station SHV and is also less than a 3.5-hour drive from the AFW hub. With the ongoing FedEx restructuring and viable alternatives via trucking service, the near-term potential for FedEx initiating service at TXK would seem to be quite low.

### 6.3 UPS

Like FedEx, UPS has several different divisions, including U.S. Domestic, International and Supply Chain Solutions. UPS Airlines services each of these divisions and is headquartered in Louisville, KY where it operates the Worldport Hub. UPS serves approximately 375 U.S. airports and almost 400 international airports. Its fleet consists of 290 UPS jet aircraft and 292 chartered aircraft (including turboprop feeders). UPS maintains several regional hubs at U.S. airports, including Dallas-Fort Worth International Airport.

In August 2022, UPS began a new corporate initiative called the Total Service Plan. This strategy is designed to promote network efficiencies, reduces costs and improve customer

service levels. One element of the plan is aimed at reducing flight hours of UPS aircraft. This has been particularly important as e-commerce activity continues to lag. Further, the company has had a moratorium on capital spending at its airport facilities for several years. With these decisions and facing an increasingly down cycle for freight transportation, it appears that UPS has prioritized cost-cutting at its air operation to improve profitability.

Finally, UPS continues to be aligned with Amazon.com for its e-commerce deliveries, even as Amazon operates its own air network and sells space on its aircraft to third-party shippers – effectively competing with UPS and other transportation providers. In 2019, FedEx voluntarily ended its relationship with Amazon to focus attention on deliveries for other e-commerce companies. UPS's partnership with Amazon may ultimately come to an end someday at which time UPS Airlines could find itself with too much capacity for the volume it handles.

The headwinds facing UPS and its airline division also seem to challenge a potential start of services at new airports like TXK. As with FedEx, UPS will likely continue to lean into using trucking services as much as possible to avoid high-cost flying. At the very least, UPS would likely ride out the current low growth period before considering an expansion of its aviation network.

#### **6.4 DHL**

DHL is a German company and is part of the logistics firm Deutsche Post. Although DHL operates in the U.S. market, as a foreign entity, it cannot serve domestic aviation routes. In 2003, DHL acquired Airborne Express and contracted with other airlines in order to compete with FedEx and UPS in the domestic U.S. express logistics market. By 2009, the experiment had failed and DHL exited the domestic market. However, DHL still maintained its services in the U.S. for international shipments. Today, all of DHL's service involving air transportation within the U.S. market are flown under contract by U.S. air carriers. For instance, DHL's flights between Phoenix and its Cincinnati/Northern Kentucky International Airport (CVG) hub are operated by ABX Air. At CVG, DHL flights departing for Europe can be operated by a foreign-flag airline.

For the U.S.-international markets, DHL is particularly active in shipping e-commerce packages as well as industrial goods like automotive parts and electronics. Given the arrangement with air carrier partners in the U.S., DHL typically operates large jet aircraft, particularly B767 freighters. Customers are serviced through DHL Global Forwarding (one of the world's largest freight forwarding companies) which has offices across in many U.S. cities. DHL Global Forwarding does not have a presence in Texarkana and the current runway length at TXK would prevent operations by the B767 freighters used by DHL in the U.S. market. Therefore, DHL would not be a candidate to TXK services at this time.

#### **6.5 Amazon Air**

As mentioned previously in this report, Amazon Air initiated U.S. services in 2016 and since then has grown its fleet to approximately 90 aircraft service over 50 U.S. cities. The current fleet consists of B767 freighters, B737 freighters and ATR-72 freighters. Most aircraft are owned by

contracted air carriers that have partnered with Amazon. Initially, Amazon Air was wholly dedicated to serving its parent company's e-commerce shipments. However, as the air operation has matured (and e-commerce growth has slowed), Amazon Air is now flying cargo for the U.S. Postal Service as well as other third-party shippers. Even with this diversification of services, Amazon Air is primarily focused on moving packages for Amazon.

As Amazon Air's fleet has grown, so have the number of points in its network. Additionally, the airline operates intra-Canada flights as well as intra-Europe flights via partner air carriers. The changing fleet mix has also led to a change in terms of the types of airports and communities served. More small markets are being added and that trend is expected to continue.

Amazon Air's U.S. network now includes cities like Wichita, KS (ICT), Des Moines, IA (DSM), and Albuquerque, NM (ABQ). Each of these can be defined as small- to medium-sized markets and, indeed, they are mainly served by Amazon Air's B737Fs and ATR72s. Importantly, the ATR-72 airports (ICT, DSM and ABQ) are in rural areas, relatively isolated geographically and located in close proximity to large Amazon fulfillment centers.

Based on research and analysis of the Amazon Air network, Hubpoint has identified several criteria that are considered for airports to attract service. While the criteria are flexible in some ways, they provide a baseline for understanding an airport's eligibility for inclusion in the Amazon Air network. The common criteria for airport selection include:

- **Presence of existing Amazon fulfillment or distribution centers in close proximity to an airport**
  - o Amazon Air not only serves local e-commerce consumer demand with its aircraft, but also links Amazon's large warehouses for inventory management purposes. This operational dynamic leads to a natural two-way flow of goods which increases aircraft utilization and optimizes the value of its vast warehouse assets.
  - o In effect, the ideal markets for Amazon Air have strong inbound demand (for customer order fulfillments) as well as strong outbound demand (for sourcing of products needed elsewhere in the network).
  
- **Access to a significant labor force**
  - o Labor supply continues to be a major issue across all industries – even coming out of the COVID-19 pandemic. This problem is especially acute for the hourly workers sought by Amazon to staff its facilities, drive delivery vehicles and load/unload aircraft.
  - o Areas with relatively high levels of potential employees are attractive because they allow Amazon's complex multi-modal distribution networks to operate efficiently and deliver customer orders on time.
  
- **Strategic location and market access**
  - o As the Amazon Air network of cities grows, it is important to find pockets of demand that can be served better with air transportation. In practice, these areas are identified by Amazon and passed on to the air group for consideration. Again,

- while certain economic indicators may signal potential for Amazon Air operations, ultimately, Amazon determines where the greatest needs exist.
- Having noted this, it is logical to conclude that new airports to the network should be sufficiently distanced from existing Amazon Air airports and serve a distinct strategic purpose.
  - An airport's location also dictates market access via highways and, preferably, in an omnidirectional manner.
- **Lack of environmental entitlements and shovel-ready on-airport sites**
- In cases where Amazon Air wants to add service, but requires additional on-airport facilities and/or infrastructure, there is a high preference to have sites that do not have environmental entitlements and can be developed in the near-term.
  - The key point is that Amazon and Amazon Air move at a fast pace and once decisions are made, it is important to execute in a timely manner.
  - Environmental studies not only consume enormous amounts of time, they also have unknown outcomes. These situations increase the risk profile of a potential operation and have been known to cause Amazon Air to suspend interest in various U.S. airports.
  - Similarly, sites that require little land preparation and zoning approvals allow Amazon Air to quickly move forward with cargo facilities development, as required.
- **Risk-sharing and airport incentives**
- Amazon and Amazon Air are known to be expert negotiators in their business transactions. This environment certainly extends to its dealings with airports regarding fees, incentives and development.
  - Historically, Amazon Air has insisted on short-term contracts with its airline partners as well as its airports. The goal is maximum flexibility and an ability to pivot in a different direction with minimal risk and exit costs. Over time and as Amazon Air has become more of a permanent fixture in the company, this position has softened somewhat, but there are still vestiges of these business practices in their airport deals.
  - While Amazon Air has invested directly in certain airport development projects, its preference has typically been to: 1) have airports directly fund required developments or 2) partner with third-party developers who assume more of the long-term risk.
- **Airport-specific capabilities**
- Depending on the circumstances, Amazon Air has been known to require airports to have CAT III ILS runway capabilities. This has been particularly important for airports in the U.S. that experience regular weather events that can potentially lead to flight delays and cancellations. Amazon Air exists to add time advantages to Amazon and if there are regular service interruptions at airports, the value of the operation is negatively impacted. The CAT III systems help to ensure that



Amazon Air's flights operate on-time, regardless of the weather conditions in a region.

- In the past, Amazon Air has also prioritized airports with capabilities to handle Group IV aircraft. This would ensure that the B767Fs could take off and land at any airport in their network. The importance of this criteria has likely been reduced as smaller aircraft have entered the fleet. However, a Group IV capable airport would allow Amazon Air to grow in a market by upgauging its aircraft and it also provides additional flexibility within the operation, even if B767Fs are only used sporadically at an airport.

Currently, there are no large Amazon fulfillment centers close to TXK. The closest fulfillment centers to TXK are a newly opened facility in Shreveport and two facilities in the Little Rock area. Finally, it is clear that even without direct Amazon Air service, many U.S. airports are benefiting from e-commerce goods shipped by Amazon and many other retailers. Amazon's partnerships with UPS and DHL are certainly increasing cargo activity at many U.S. airports, even as e-commerce growth has slowed in recent months. While the near-term prospects for an Amazon Air service are not clear for TXK, it will be important for the Airport to monitor developments within the region related to e-commerce fulfillment centers and distribution centers that interact with air cargo carriers and to be prepared to facilitate their needs. It is particularly helpful that Amazon Air operates a wide-range of aircraft, including B737s and ATR72s, that can utilize TXK's existing runways.

Interestingly, many of the same criteria detailed above are considered by other air cargo operators in their network expansion decisions. Airports that satisfy these requirements can effectively position themselves for attracting air services from a variety of cargo airlines.

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## 7 SWOT ANALYSIS

### 7.1 Introduction

An analysis of the Texarkana Regional Airport 's **S**trengths, **W**eaknesses, **O**pportunities and **T**hreats (“SWOT”) related to air cargo is a useful tool to identify areas where the Airport may focus attention to ensure the success of its air cargo business. On the following page, a SWOT matrix is presented to summarize each element. Notably, Strengths and Weaknesses are considered to be Internally-oriented – meaning they can be influenced by the Airport or they relate to factors on or near the Airport. On the other hand, Opportunities and Threats are considered to be Externally-oriented – meaning they are largely outside the influence of the Airport and relate more to the macro-environment.

## 7.2 Air Cargo SWOT Analysis Matrix for the Texarkana Regional Airport

<p style="text-align: center;"><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Efficiencies from uncongested airport environment</li> <li>• Nearby access to interstate highway system (I-40, I-30, I-20)</li> <li>• Newly acquired land designated for air cargo in southwest area of airport</li> <li>• Available airport land for cargo-related development with no constraints</li> <li>• Airport management and community committed to growing airport activities beyond traditional commercial passenger operations</li> <li>• Aggressive and creative Economic Development group seeking opportunities that can benefit from air cargo operations at TXK</li> </ul>	<p style="text-align: center;"><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• No current cargo operations at TXK</li> <li>• No available cargo facility for potential new operators</li> <li>• Existing runways lack the required length and strength to accommodate certain common freighter aircraft</li> <li>• No existing cargo ramp for freighter aircraft</li> <li>• Lack of belly cargo capacity on passenger aircraft serving TXK</li> <li>• No existing cargo ground handler and no equipment or trained staff to handle larger freighter aircraft</li> <li>• No local presence of air freight forwarding companies</li> </ul>
<p style="text-align: center;"><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Economic Development positioning to attract automotive manufacturer to Texarkana; auto industry regularly uses air cargo services</li> <li>• Potential for new domestic heavy freight air cargo operator in the U.S. domestic market</li> <li>• Amazon Air fleet continues expansion – including at airports in smaller communities</li> <li>• Diversified group of companies at nearby TexAmericas Center may generate air cargo demand</li> <li>• Potential for e-commerce fulfillment centers at nearby logistics parks which can generate air cargo demand</li> </ul>	<p style="text-align: center;"><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• No current manufacturer of air-eligible commodities in Texarkana region</li> <li>• Lack of concentrated and consistent demand for air cargo services</li> <li>• TXK close to existing airports with integrated express and international cargo services</li> <li>• Small regional population constrains consumer demand</li> <li>• No large nearby Amazon fulfillment center in close proximity to TXK</li> <li>• Slowdown in e-commerce is limiting need for additional fulfillment centers and air cargo network expansion</li> <li>• FedEx Express combining with FedEx Ground likely leads to reductions in existing U.S. flight operators and no expansion to new airports</li> </ul>

## 8 SYNTHESIS

Based on the findings of this Cargo Air Service Development Feasibility Study, the near-term prospects of a cargo carrier starting service at Texarkana Regional Airport are challenged by both internal and external conditions. Internally, the Airport must solve for some of the Weaknesses in its control and as described in the SWOT analysis. Externally, slowing U.S. economic growth and prevailing cost-cutting strategies of integrated express carriers are working against potential expansions to new airports. Further, certain air cargo opportunities for TXK require enabling events to occur before air cargo demand materially increases. These events include the development of large e-commerce fulfillment centers, attraction of a large manufacturer to a Texarkana area site, and increased regional consumer activity driven by population and income growth.

Outlined below are three primary concepts for consideration by TXK management in its current Master Plan process as well as its air cargo development initiatives moving forward. These concepts include: 1) an integrated express carrier service; 2) an e-commerce carrier service; and 3) a general cargo freighter service. Descriptions of these concepts have been prioritized to reflect TXK's capabilities to handle the specific types of air cargo operations.

### 1. Integrated Express Carrier

#### Overview

- Even with current lack of U.S. network expansion, integrators still present the lowest hurdle for potential air cargo service at TXK.
- These carriers regularly operate in smaller communities with turboprop aircraft that are right-sized for the markets and offer an appropriate entry-point for services at a new airport, like TXK.
- Further, these turboprop aircraft can operate with the existing runways at TXK and likely do not have needs for dedicated on-airport cargo facilities.

#### Potential Action Items

- Identify and quantify demand levels of existing/potential air cargo users that could benefit from integrated express carrier services at TXK.
- Track demographic trends in the region signaling increased consumer demand for air express services.
- Work closely with Economic Development groups to cross-promote the Texarkana region and the Texarkana Regional Airport to targeted companies that have demand for air cargo services.

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## 2. E-commerce Carrier

### Overview

- E-commerce carriers (e.g. Amazon Air) continue to develop their network of U.S. airports.
- Amazon Air operates a variety of aircraft, including ATR-72 turboprop freighters, which are primarily utilized in smaller markets, like TXK.
- Further, these turboprop aircraft can operate with the existing runways at TXK and likely do not have needs for dedicated on-airport cargo facilities.

### Potential Action Items

- Work closely with Economic Development groups to define strategies to attract large e-commerce fulfillment centers with TXK airport capabilities as a key element of recruitment.
- Refer to Amazon Air's criteria for service at airports and take necessary steps to address.

## 3. General Cargo Freighter

### Overview

- Industry trends and intelligence gathering suggests the potential initiation of a scheduled, General Cargo Freighter operation serving the U.S. Domestic market.
- This type of operation would likely serve the freight forwarding community and carry heavy freight and industrial goods.
- General Cargo Freighter services may also leverage nearshoring trends with operations between Mexico and smaller, alternative U.S. airports.
- These air carriers typically utilize larger cargo aircraft like B767 freighters that cannot currently operate at TXK due to runway constraints and would require some type of dedicated on-airport cargo facility.

### Potential Action Items

- Work closely with Economic Development groups to define strategies to attract large companies/manufacturers (e.g. automotive industry OEMs) that regularly demand general air cargo services with TXK airport capabilities as a key element of recruitment.

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- Seek grant funding and FAA approval for runway improvements to accommodate larger cargo aircraft (e.g. B767 freighters).
  - Determine infrastructure requirements of a General Cargo Freighter service, including aircraft ramp space and on-airport cargo facility specifications.

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## 9 FORECASTS

### 9.1 Introduction to TXK Air Cargo Forecasts

For many U.S. commercial airports, the process of forecasting air cargo for a Master Plan begins with a review of the subject airport's historical air cargo operations and tonnage levels. Typically, this data provides an initial understanding of air cargo demand for the airport and its region through a time-series analysis. When the air cargo data is available for a sufficient length of time and with enough detail, various forecast modeling techniques can be utilized to produce a Baseline forecast.

In the case of the Texarkana Regional Airport (TXK), the available data for air cargo is sparse and inconsistent. For the 20-year period 2002-2022, only 11 years show cargo tonnage data based on a review of U.S. DOT, T-100 carrier reports. In those 11 years, only 5 years show cargo tonnage exceeding 2.0 short tons (1.8 metric tons). Further, an analysis of the airlines carrying the TXK cargo over time, suggests that much of the activity was anomalous in nature, with no consistent demand profiles. It is likely that many of the TXK operations reported in the T-100 reports are one-time charters used for a specific purpose.

With this situation, the TXK Master Plan consulting team deemed the existing cargo data unreliable and insufficient for forecasting purposes. However, based on information gathered through primary and secondary research, it is still necessary and important to develop cargo forecasts due to the potential of cargo airlines initiating services at TXK in the future.

#### Alternative Approaches to Air Cargo Forecasting

Based on prior experience at other airports, air cargo forecasts for individual airports (especially those that are not major cargo gateway airports) are often best formulated using a service-based approach or a scenario-based approach.

A service-based approach to air cargo forecasts is established under the premise that airports can only realize cargo volumes to the extent that adequate supply of air cargo capacity (from air carriers) is present and available at those airports. In fact, for an airport level forecast, supply of air cargo capacity is just as important as the “demand-pull” created by economic growth and activity. For the service-based approach, estimates of future aircraft operations (both passenger and all-cargo operations) are required to impute air cargo tonnage on those flights. The future aircraft operations are a function of historical operations at the airport as well as any forward-looking information regarding demand and related possible net new operations or anticipated changes in the profile of existing operations. The summation of cargo tonnage via this methodology, along with other assumptions and analyses, produces an airport-level air cargo forecast.

A scenario-based approach to air cargo forecasts is similar to the service-based approach, but is particularly useful for airports with little history with air cargo operations and for airports pursuing specific types of air cargo development that have particular profiles from the perspective of airline operations and service patterns. As the name implies, the scenario-based

approach relies on the definition of specific cargo-related scenarios at airports (including assumptions of operational details and service development over time) and the cargo volumes associated with those scenarios. While this approach can be seen as somewhat prospective, its value from a planning perspective lies in quantifying possible levels of cargo activity should those types of scenarios come to fruition. From this standpoint, it is important to ensure that the scenarios are as realistic and informed as possible, but for planning purposes, also encompass a wide-range of possible cargo air service development environments that could be experienced by an airport during the forecast period.

Notably, both of these approaches to air cargo forecasts have been utilized in Master Plans for U.S. airports over the past 20 years, either as standalone forecasts or to supplement Baseline forecasts developed via traditional methods. In each case, the FAA has accepted and approved the forecasts. It is especially important to consider these alternative approaches to cargo forecasting due to the extraordinarily dynamic nature of the air cargo industry. In recent years, the growth of e-commerce, supply chain disruptions and the increasing importance of alternative cargo airports have led to new services at airports of all types and sizes – including airports that never had regular cargo services before.

The consulting team developed multiple scenarios to address a variety of potential situations at TXK, including new cargo air services by FedEx Express, Amazon Air and a general cargo freighter airline. These three scenarios cover the range of cargo air services currently present in the U.S. – an integrated express operation focused on small packages, a dedicated e-commerce operation and an operation focused on heavy freight and industrial goods.

The following sections describe the forecast background, methodology, assumptions, and output for the three defined scenarios of air cargo development at TXK. In each case, the substantive quantitative output relates to annual air cargo tonnage and annual operations by type of aircraft. This data will then be used by the airport planners to determine future cargo facility and infrastructure needs at TXK.

## **9.2 Air Cargo Forecast Scenario: TXK New Entrant FedEx**

In the Domestic U.S. market, the most common cargo operators at airports are the integrated express carriers, FedEx and UPS. Collectively, the two carriers operate at hundreds of U.S. airports utilizing a variety of aircraft ranging from large B777 and B747 freighters to very small Cessna turboprops flown by partner airlines. Unlike UPS, FedEx's corporate roots are in its air express operation and ground capabilities were added later. As such, FedEx has always been more focused on air cargo and maintained a larger aircraft fleet and air network.

Although both FedEx and UPS have mature air networks in the U.S., they continually evolve with different fleets, operational profiles and airports served. FedEx is particularly active at Southern U.S. airports compared to UPS and the FedEx maintains a major hub at Fort Worth Alliance Airport (AFW). Specific to Texarkana, FedEx Express and TXK have had past discussions about air cargo services and a new FedEx Ground began operations in recent



years near the airport. While FedEx Express and FedEx Ground maintain separate operating structures, there have been persistent reports that the two units will be more aligned (and perhaps fully integrate) in the coming years to remove redundancies. Should this alignment occur, airports in proximity to FedEx Ground facilities may benefit.

With this background, the integrated express forecast scenario for TXK was developed based on a prospective FedEx Express service with turboprop aircraft operating from AFW. In addition to operating a variety of large jets at AFW, FedEx operates three types of turboprops at AFW, including the Cessna 208B, ATR-42F and ATR-72F.

Key assumptions of the FedEx scenario for TXK include:

- Assumes startup in full year 2025, allowing necessary marketing, planning and operational lead times for successful FedEx launch
- Service operates Monday through Friday with five flights per week at startup in each direction
- Startup aircraft is the Cessna 208B Super CargoMaster, a single engine aircraft commonly used by FedEx in smaller markets
- Upgauging occurs in 2031 to the larger Cessna C408 SkyCourier as FedEx modernizes its feeder fleet and retires the older C208B
- Includes additional annual departures for extra day during leap years (2028, 2032, 2036, 2040)
- Aircraft tonnage capacities are adjusted for lower density of package and e-commerce traffic typically handled by FedEx (using a density of 6 pounds per cubic foot)
- Startup year volumes assumed at 60% of flight capacity, growing to 65% in 2026 and 70% in 2027, then tapering off to generally align with Boeing’s long-term estimates for the Domestic U.S. market sourced from the World Air Cargo Forecast
- Startup year growth for 2025-2027 is accelerated to reflect faster initial growth in new market before achieving steady state
- C208B volumes are validated using FedEx AFW pounds per flight averages reported in U.S. DOT T-100 reports
- As of March 2023, FlightRadar24 shows FedEx with seven C408 aircraft currently in service; FedEx reports scheduled deliveries of forty-four new C408s through the end of 2026

From an operations perspective, the FedEx scenario results in the annual combined aircraft departures and arrivals shown in **Exhibit 9.1**.

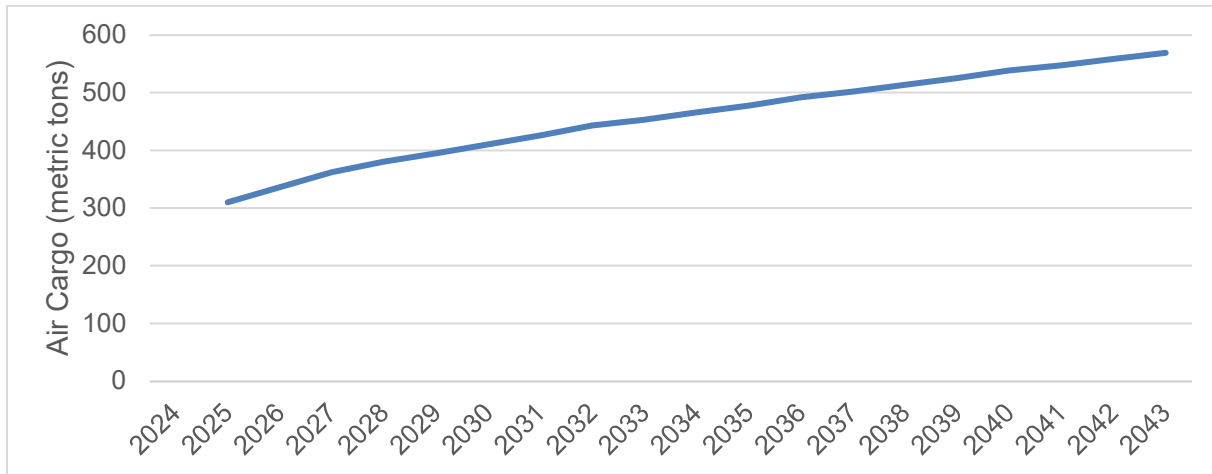
**Exhibit 9.1  
FedEx – TXK Annual Aircraft Operations Forecast**

	2025-2030	2031-2043
<b>C208B</b>	522	0
<b>C408</b>	0	522

Source: Hubpoint analysis

The tonnage forecast for cargo on FedEx flights at TXK is depicted below in **Exhibit 9.2**. This shows air cargo tonnage growing from 310 metric tons in 2025 to 569 metric tons in 2043.

**Exhibit 9.2**  
**FedEx – TXK Air Cargo Tonnage Forecast**



Source: Hubpoint analysis

Forecast FedEx tonnage growth is summarized in **Exhibit 9.3** in terms of CAGRs for select annual periods.

**Exhibit 9.3**  
**FedEx – Forecast Growth Rates of Air Cargo Tonnage**

	2025-2030	2025-2035	2025-2040	2025-2043
<b>CAGR</b>	5.8%	4.4%	3.7%	3.4%

Source: Hubpoint analysis

### 9.3 Air Cargo Forecast Scenario: TXK New Entrant General Cargo Freighter

A key objective of the Texarkana regional economic development community is the attraction of automotive manufacturing activities. As the auto industry transitions from combustion to electric vehicles, auto manufacturers are actively investing in new facilities in the U.S., particularly in the Southern states where there are cost, geographic and workforce advantages. Major manufacturing and logistics sites around in Texarkana have already been designated for industrial purposes and economic developers have experienced sustained interest from various companies considering locations in the region. Auto manufacturers expect that plants can be constructed and operational within 24-36 months of selecting a site.

With regional commitment and investment devoted to attracting specific types of industrial activity to Texarkana, it is prudent to anticipate the associated transportation and logistics requirements. It is well-known that the auto industry generates a multitude of supply chain demands, including air cargo services. Typically, auto manufacturers utilize just-in-time processes to keep inventory carrying costs down and to increase operational efficiencies. In turn, these manufacturing practices lead to the regular use of air cargo to ship parts and components between plants.

To account for the future successful recruitment of an auto manufacturer or similar type of industry to the Texarkana region, an additional cargo forecast scenario for TXK was developed. Industry trends and intelligence gathering suggests the potential initiation of a scheduled, General Cargo Freighter operation serving the U.S. Domestic market and carrying heavy freight. This type of operation would likely serve the freight forwarding community and would not compete directly with integrated express carriers like FedEx and UPS.

Freight forwarders act as middlemen between shippers and transportation service providers to deliver goods to consignees. Whereas FedEx and UPS control their own airlines, forwarders rely on third-party airlines to carry their shipments. In the U.S. market, several cargo airlines (e.g., Kitty Hawk Cargo, BAX Global, Emery Worldwide) once served forwarders' needs for expedited shipping of heavier, bulkier industrial goods, including auto parts and components. However, those airlines ceased operations for a variety of reasons in the early 2000s. Since then, the heavy freight market has largely been served by trucking companies and some smaller charter airlines. With persistent supply chain disruptions, truck driver shortages and demand for reliable air cargo services, it is anticipated that scheduled general cargo airlines may once again serve the U.S. Domestic market. This may be even more likely as U.S. industrial production increases with trends like reshoring and nearshoring and the development of supply chains requiring air transportation of general cargo.

For TXK, the key assumptions of the General Cargo Freighter scenario include:

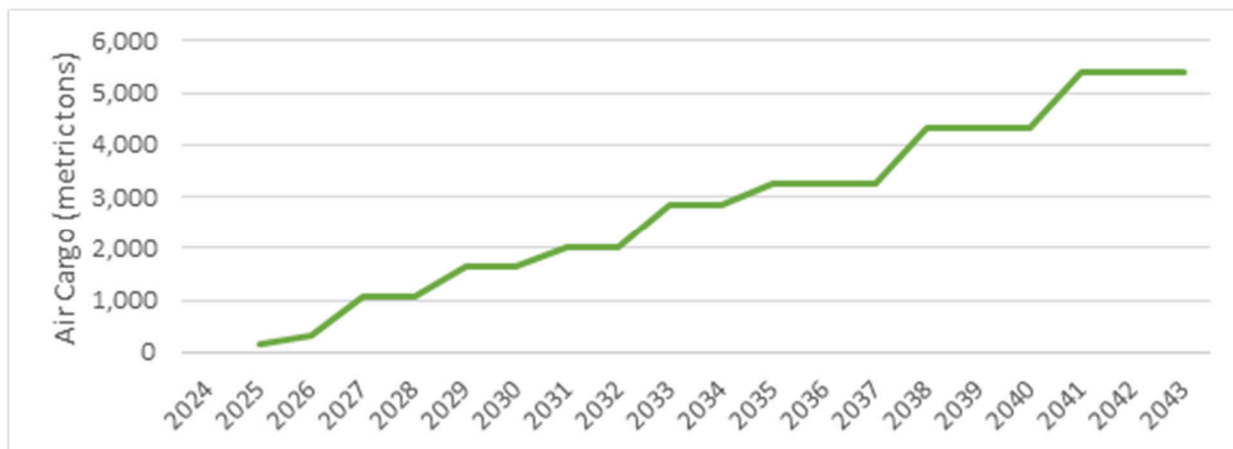
- A B757-200F operation at TXK which will increase weekly frequencies over the forecast period
- Freighter aircraft will operate on multi-stop itineraries with only a portion of the aircraft allocated to each airport

- A 2025 start of services at TXK with eight seasonal flights; followed by sixteen seasonal flights in 2026; these services are envisioned as part of the pre-production phase of a new plant
- Scheduled services commence in 2027 with two weekly flights, growing to three weekly flights in 2029 and then four weekly flights in 2035
- Estimated TXK aircraft allocations (i.e., the portion of the entire aircraft capacity devoted to TXK) are conservative for the scheduled services - ranging from 20% in 2027 to 50% in 2042
- The General Cargo Freighter scenario output would be additive to the Baseline forecast

With these assumptions and following a step-wise growth pattern with increasing TXK flight frequencies and successively higher aircraft allocations over time, forecasts of air cargo tonnage and aircraft operations were developed.

A tonnage forecast for a General Cargo Freighter service at TXK is depicted below in **Exhibit 9.4**. This shows air cargo tonnage growing from 166 metric tons in 2025 to 5,408 metric tons in 2043. In terms of air cargo tonnage growth, this forecast scenario produces a Compound Annual Growth Rate (CAGR) of 10.6% for the period 2027-2043, when scheduled air cargo services are assumed to be operating at TXK.

**Exhibit 9.4  
TXK General Cargo Freighter Service – Air Cargo Tonnage Forecast**



Source: Hubpoint analysis

## 9.4 Air Cargo Forecast Scenario: TXK New Entrant Amazon Air

The Amazon Air forecast scenario for TXK was developed based on the e-commerce company's continuing expansion at multiple U.S. airports over the last several years using a primarily contracted aircraft fleet. It represents a "what-if" proposition should Amazon Air choose to initiate TXK service which can then be factored into airport planning decisions.

While Amazon Air's initial entry into the U.S. domestic market utilized widebody freighters (767-200F and 767-300F) flying in and out of major distribution hubs, its more recent growth has focused on narrowbody (737-800F) and turboprop (ATR-72F) freighter operations. These aircraft have allowed Amazon Air to expand its geographical reach and economically serve small and mid-size U.S. market areas. Recent examples of the company's ATR-72F expansion include operations at Des Moines, IA (DSM), Albuquerque, NM (ABQ), Omaha, NE (OMA), Wichita, KS (ICT) and Mobile, AL (BFM). Amazon Air's ATR-72F fleet is currently based at Fort Worth Alliance Airport (AFW) and the turboprops are operated by Silver Airways.

Even with the recent re-calibration of U.S. e-commerce demand coming off of pandemic highs, the future of e-commerce and the use of air cargo is still very positive. Amazon has invested \$1.5 billion in its new hub at Cincinnati/Northern Kentucky International Airport (CVG) and continues to operate and expand its aviation networks not only in the U.S., but in Europe and India as well. At its core, Amazon Air is a true differentiator for Amazon.com, Inc. and there are no signs of a lack of long-term commitment to the airline.

A major criterion for Amazon Air regarding the airports it serves is proximity to one of Amazon's large fulfillment centers. While the presence of a fulfillment center does not guarantee an Amazon Air operation, the lack of a nearby fulfillment center removes an airport from consideration. Currently, the closest large fulfillment center to TXK is in Little Rock which is over 2 hours away by truck. However, in recent years, e-commerce companies have considered Texarkana as a potential site for fulfillment centers and the closest Amazon Air points of service are at Fort Worth Alliance (AFW) and Houston Intercontinental (IAH). Given this situation and the expected continued growth of e-commerce in the U.S., an Amazon Air forecast scenario was developed for TXK.

Key assumptions of the Amazon Air scenario for TXK include:

- A 2029 startup with daily service using an ATR-72F to the AFW hub, resulting in two operations per day (i.e., one arrival and one departure) on six days each week
- Based on intel gathered from sources close to Amazon Air, schedule development for ATR-72F airports will likely progress first with additional frequencies and eventually migrate to larger aircraft
- A second daily flight with an ATR-72F commences in 2031 to the AFW hub, for a total of four daily operations on six days each week
- Using a time-series approach, throughout the forecast period Amazon Air annual traffic growth rates run consistently higher than the annual growth rates derived from Boeing's World Air Cargo Forecast for the U.S. Domestic market
- Payload capacity for the ATR-72F is based on analysis Amazon Air's current operations of the aircraft in the U.S.

- As continued volume growth approaches maximum capacity on the ATR-72Fs, Amazon Air upgauges to the larger capacity 737-800F in 2042 with a single daily round trip

From an operations perspective, the Amazon Air scenario results in the annual combined aircraft departures and arrivals shown in **Exhibit 9.5**.

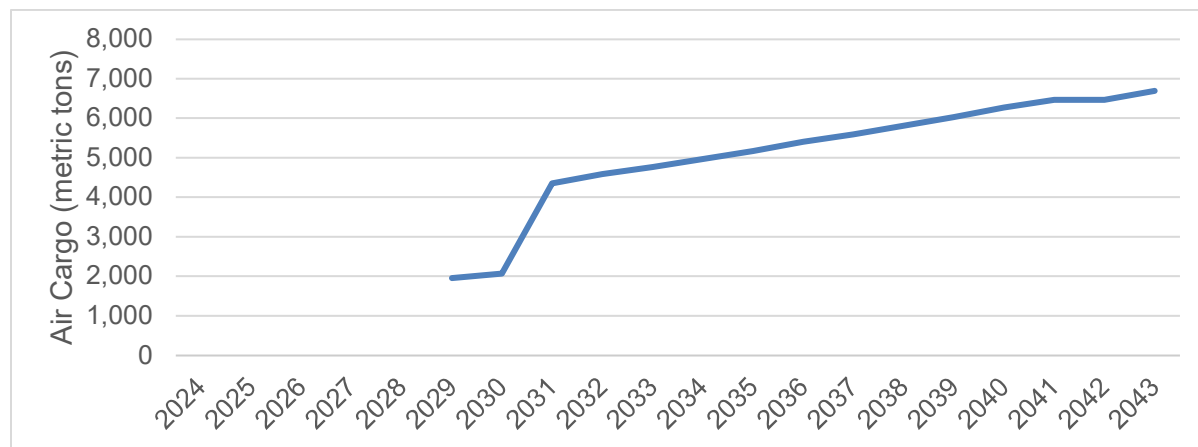
**Exhibit 9.5  
Amazon Air – TXK Annual Aircraft Operations Forecast**

	2029-2030	2031-2041	2042-2043
<b>ATR-72F</b>	626	1,256	0
<b>737-800F</b>	0	0	626

Source: Hubpoint analysis

The tonnage forecast for cargo on Amazon Air flights at TXK is depicted below in **Exhibit 9.6**. This shows air cargo tonnage growing from 1,961 metric tons in 2029 to 6,693 metric tons in 2043.

**Exhibit 9.6  
Amazon Air – TXK Air Cargo Tonnage Forecast**



Source: Hubpoint analysis

Amazon Air’s tonnage growth is summarized in **Exhibit 9.7** in terms of CAGRs for select annual periods.

**Exhibit 9.7  
Amazon Air - Forecast Growth Rates of Air Cargo Tonnage**

	2029-2034	2029-2039	2029-2043
<b>CAGR</b>	20.4%	11.3%	9.2%

Source: Hubpoint analysis

