

Working Paper #1

DeKalb Peachtree Airport 2020-2040 Airport Master Plan

Chapter 1 – Introduction

Chapter 2 – Inventory of Existing Conditions

Chapter 3 – Forecasts of Aviation Activity

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Chapter 1 – Introduction

1.1 Introduction

The following report presents the Airport Master Plan Update for DeKalb Peachtree Airport (PDK or the airport) located in Chamblee, Georgia. This report was prepared in accordance with the requirements of the Federal Aviation Administration (FAA), the Georgia Department of Transportation (GDOT), and DeKalb County (Sponsor). All portions of this document are based upon the guidelines set forth in FAA Advisory Circulars (AC) 150/5070-6B, *Airport Master Plans* and AC 150/5300-13A, *Airport Design*.

The intent of this master plan is to provide the framework needed to guide future airport development of PDK Airport.

PDK's vision is to be the Southeast's finest general aviation airport. Along with its mission statement, PDK's vision translates into goals established in the master plan that support modernization of airport facilities, enhance compatible land use, foster economic development, respond to aeronautical demand, and ensure the safety and security of the traveling public.

PDK is a general aviation airport in northeast metropolitan Atlanta, Georgia within the city limits of Chamblee of DeKalb County. The airport is bordered by Chamblee Tucker Road to the north, Buford Highway to the east, Dresden Drive to the south and Clairmont Road to the west. Immediately surrounding the airport are the metropolitan cities of Dunwoody, Doraville, and Brookhaven. The airport is located near the major business districts of Atlanta, including 8 miles north of Decatur, 12 miles northeast of downtown Atlanta, 8 miles east of Buckhead, 6 miles east of Lindbergh and 4 miles southeast of Perimeter Center. Interstate 285 is reachable by Peachtree Industrial Boulevard in 4 miles and Interstate 85 is reachable by Clairmont Road in 3 miles.

PDK's prime location has made it the business travelers' choice when visiting the metropolitan area, which is why the airport has been the busiest general aviation airport in the state since its transition from Naval Air Station to general aviation airport in 1959.

1.2 History

The Chamblee area was settled in the 1820s as an agricultural community. The first rail line through Chamblee was established in 1845. The town was incorporated as the City of Chamblee in 1908.

The land PDK was built upon originally contained woods and several farms. In 1917, the land became the location of Camp Gordon, a World War I (WWI) training camp. After WWI, the property was sold and in 1940, DeKalb County purchased the property with the intention of building an airport.

World War II (WWII) began and shortly thereafter, the U.S. Navy leased the entire property and constructed a Navy Reserve training station. Eventually, the airport became large enough to commission as a full Naval Air Station. The Naval Air Station continued to operate at PDK for 20 years until it was handed over to the County in 1959.

Following its transition from a military base into a general aviation airport and under the guidance of PDK's first airport manager, Henry Doc Manget, Jr., planning and construction began rapidly to convert the



facility into civilian uses during the rise of the Jet Age. In 1966, the Navy control tower was replaced by a new and modern facility. In 1968, a 5,000-foot all-weather runway and parallel taxiway system was constructed. At the same time, land areas were developed for aircraft storage and major leaseholders. By 1972, over 300 aircraft were based at PDK, increasing to 530 by 1986. In 1980, the airport commissioned its instrument landing system which provided a much higher degree of safety during poor weather. In 1988, the primary runway was extended 1,000 feet and a new modern air traffic control tower was constructed. Over time, older military facilities have been modernized or replaced to support the growing general aviation needs of the community.

In the post-WWII years, industry came to Chamblee and slowly transitioned the community from a farming community into what it is today. The General Motors Corporation (GM) moved to Chamblee in 1948, which prompted the paving of what has become Peachtree Industrial Boulevard. The addition of the GM plant signaled a period of substantial industrial growth in the Chamblee area. Industrial growth also meant demand for housing. The construction of many neighborhoods primarily consisted of American Small Houses, in the late 1940s and early to mid-1950s. More housing as well as commercial development came to Chamblee from the late 1950s through the 1970s as the Atlanta suburbs expanded into the area.³ Close-in neighborhoods to PDK include areas commonly referred to as Ashford Park, Brookhaven, Briarcliff Woods, Drew Valley, and Sexton Woods.

Although, Chamblee is the closest city to the airport, additional cities in the nearby vicinity include Brookhaven to the west, Doraville and Dunwoody to the north, and Decatur to the south.

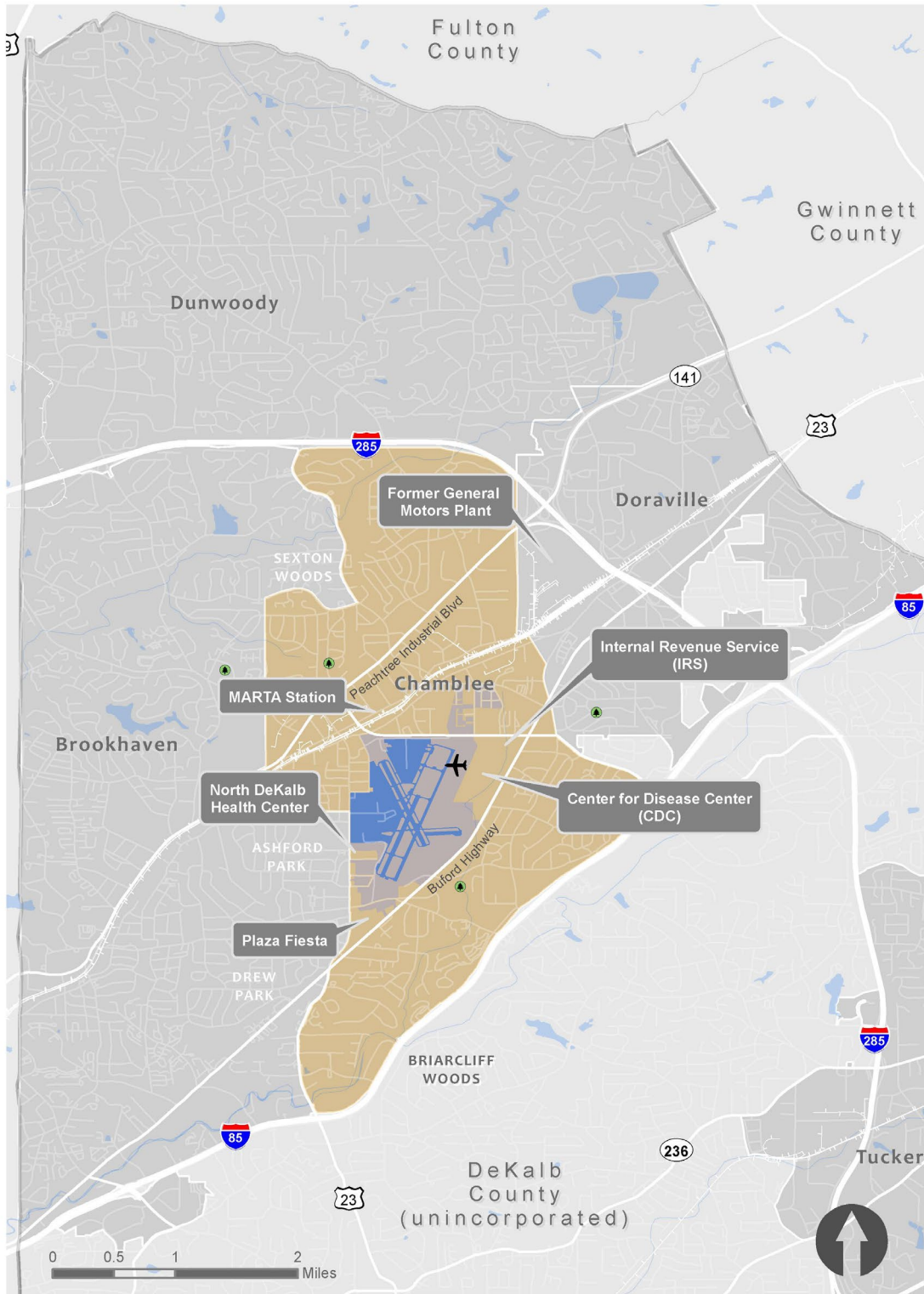
Currently, land uses surrounding PDK are a mixture of single-family residential, multi-family apartments and condominiums, commercial, industrial, institutional and public uses. Nearby major non-residential uses include: Chamblee Metropolitan Atlanta Rapid Transit Authority (MARTA) Station, North DeKalb Health Center, Plaza Fiesta, Center for Disease Control (CDC), and the Internal Revenue Service (IRS). Dresden Park, Brook Park, Keswick Park, Blackburn Park, and Briarwood Recreational Center are also in the vicinity. In nearby Doraville, the GM plant was closed in 2008 and is currently being redeveloped into a mixed-use transit-oriented development.

The commercial corridors of Peachtree Industrial and Buford Highway are comprised of restaurant, auto dealership/shops, and miscellaneous retail businesses. The Peachtree Industrial corridor follows CSX and MARTA railroad tracks north toward Interstate 285 (I-285). I-285 is Atlanta's perimeter major road and circles the eastern and northern areas near PDK. Another interstate (I-85) parallels the Buford Highway corridor east of the airport, traveling north and south.

The location relative to the surrounding area is depicted in **Figure 1-1**.

³ *Architectural Survey of the DeKalb Peachtree Airport Study Area, DeKalb County, Georgia, Brockington Associates, 2004.*

Figure 1-1: Location Map



Source: Michael Baker International, 2019.



1.3 PDK Characteristics

PDK is a public-use facility owned by DeKalb County and maintained by DeKalb County Airport Division. The airport serves a variety of general aviation users. Airport development is guided the DeKalb County Board of Commissioners in compliance with guidelines and regulations of the FAA and GDOT.

In 2018, PDK had 355 based aircraft comprised of 258 single-engine, 39 multi-engine 46 jets and 12 helicopters. In addition, the airport will routinely accommodate 50 to 60 visiting aircraft on an average day and upwards to 230 aircraft visiting aircraft during special events such as the 1996 Olympics, 2013 Final Four, and the recent Super Bowl LIII held in 2019.

According to airport records, PDK accommodated 151,132 general aviation operations in 2018, of which 72.3% where itinerant and 27.7% where local. Businesses operating at PDK include corporate flight departments, charter operations, aircraft maintenance and avionics repair, fixed wing helicopter training, aircraft scenic services and Fixed Based Operators (FBOs). Other activity consists of medical evacuation service and local new station helicopter units. The airport does not accommodate Part 121 commercial airline service or regular military activity.

The existing airport facilities include three active runways, taxiways, hangars, airport services, administration building and various airport users and businesses. A range of business and organizations make up the diverse list of airport users housed at the airport. There are three fixed based operators (FBOs) at the Airport: Atlantic Aviation, Epps Aviation, and Signature Flight. These businesses are an anchor to the general aviation activities providing a variety of services to travelers and aircraft at the airport.

In addition to the three FBOs, over 25 other businesses operate on the airport's property. These businesses include aircraft maintenance, car rental agencies, legal services, aircraft charter services, helicopter touring services and training, building and design consultants, an Aircraft Rescue Fire Fighting (ARFF) station, 10 flight training schools, one park, a Public Safety K-9 facility, DeKalb County Sanitation, two restaurants, and number of corporate businesses with based aircraft.

1.4 PDK's Role in the National Transportation System

The following sections review the aeronautical roles of PDK within the national transportation system.

FAA National Plan of Integrated Airport Systems Role

In the United States, there are 5,136 public-use airports. Of these there are 3,321 airports that are identified by the FAA's *2019-2023 National Plan of Integrated Airport Systems* (NPIAS) as important to national air transportation and eligible to receive grants under the FAA Airport Improvement Program (AIP). The NPIAS groups airports into two categories: Primary and Nonprimary. Primary airports are airports receiving scheduled air carrier service with more than 10,000 passengers a year. Primary airports are further grouped into four subcategories: large hub, medium hub, small hub and nonhub. Nonprimary airports primarily support general aviation aircraft. **Table 1-1** presents the NPIAS service level classifications and their criteria.



Table 1-1: FAA NPIAS Classifications

Airport Classifications		Hub Type: Percentage of Annual Passenger Boardings	Common Name
Commercial Service: Publicly owned airports that have at least 2,500 passenger boardings each calendar year and receive scheduled passenger service	Primary: Have more than 10,000 passenger boardings each year	Large: 1% or more	Large Hub
		Medium: At least 0.25%, but less than 1%	Medium Hub
		Small: At least 0.05%, but less than 0.25%	Small Hub
		Nonhub: More than 10,000, but less than 0.05%	Nonhub Primary
	Non Primary	Nonhub: At least 2,500 and no more than 10,000	Nonprimary Commercial Service
Nonprimary (PDK's Role) (Except Commercial Service)		Not Applicable	Reliever (PDK's Role) General Aviation

Source: 2019-2023 NPIAS.

In the FAA NPIAS, PDK is categorized as a *Nonprimary General Aviation – Reliever Airport*. The term “reliever” means that PDK relieves congestion from nearby Hartsfield-Jackson Atlanta International Airport (ATL) by offering an alternative airfield for use by general aviation aircraft.



As reported in the 2019-2023 NPIAS, the term “reliever” is defined in the FAA’s authorizing statute at 49 U.S.C., section 47102, as “an airport the Secretary designates to relieve congestion at a commercial service airport and to provide more general aviation access to the overall community.” The term “reliever” is relevant in a small number of contexts but is increasingly problematic because only a small number of commercial service airports still experience significant congestion. Regardless, because the term is still defined and used in statute, the FAA continues to report the current designations in the NPIAS.

In 2012, the FAA further defined the roles of General Aviation airports in *General Aviation Airports: A National Asset* (known as the ASSET report). This comprehensive study developed the following categories of general aviation airports: National, Regional, Local, Basic, and Unclassified. **Table 1-2** presents these categories and their descriptions. PDK is classified in the ASSET report as a *National* airport.

Table 1-2: FAA ASSET Categories

Category	Criteria
National (PDK’s Role)	Supports the national and state system by providing communities with access to national and international markets in multiple states and throughout the United States.
Regional	Supports regional economies by connecting communities to statewide and interstate markets.
Local	Supplements communities by providing access to primarily intrastate and some interstate markets.
Basic	Links the community with the national airport system and supports general aviation activities (e.g., emergency services, charter or critical passenger service, cargo operations, flight training and personal flying).
Unclassified	Airports that do not fit into any other category.

Source: “General Aviation Airports: A National Asset” and ASSET 2: In-Depth Review of the 497 Unclassified Airports”

Georgia Aviation System Plan Role

The *Georgia Aviation System Plan* is a state level planning document prepared by GDOT. Most recently updated in 2019, the system plan evaluated all public-use general aviation airports in Georgia and classified each according to the type of aviation demand served. **Table 1-3** presents the system plan airport role classifications.



Table 1-3: Georgia Aviation System Plan Airport Levels

Airport Level	Description
Level I	Minimum Standard General Aviation Airport
Level II	Business Airport of Local Impact
Level III (PDK's Role)	Business Airport of Regional Impact

Source: Georgia Aviation System Plan, 2019.

PDK is classified as a Level III airport, a *Business Airport of Regional Impact* and of significant importance to the state's aviation needs.

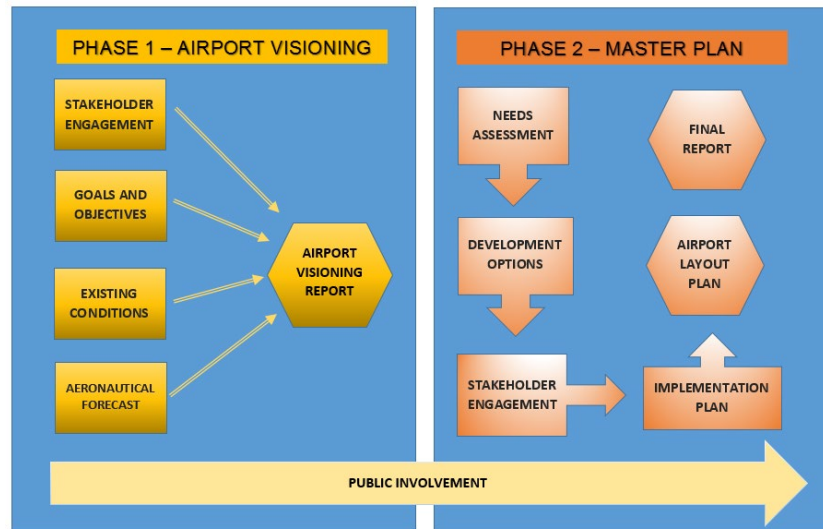
1.5 The Master Plan Process

This Master Plan report provides an outline of the development actions necessary to maintain airport facilities. This document along with the ALP drawing set provides officials responsible for scheduling, budgeting, and funding of the airport improvements with a planning guide and general timeline for development. To accomplish the objectives and allow for timely and orderly development, this process was separated into two phases as depicted in **Figure 1-2** below.

Phase 1 – Airport Visioning.

Airport visioning is the exercise of developing broad goals and objectives of the master plan through a process of stakeholder involvement, inventory of existing conditions, and preparation of a 20-year aeronautical forecast. Phase 1 does not identify recommend improvements, rather it sets the stage for Phase 2 by promoting an understanding of the current state of the airport, what the airport can expect growth wise, and how the airport's role in the transportation system and community will shape its goals and objectives moving forward.

Figure 1-2: Master Plan Process



Phase 2 – Master Plan.

Once the goals and objectives are established and the aeronautical forecast is reviewed and approved by GDOT, Phase 2 of the master plan begins. Phase 2 compares the forecasted aeronautical demand to the existing airport facilities and determines what needs may exist at PDK now and into the future. Phase 2 also focuses on modernization of facilities, evaluates potential economic development opportunities, and reviews FAA guidelines for safe, efficient use of aeronautical facilities.

As necessary, development options are created that identify alternative scenarios for implementing proposed improvements and consider factors such as time, cost, and environmental impacts. These alternatives are reviewed by the airport stakeholders for suggestions and feedback. A final preferred alternative is selected by the airport. Once the list of preferred improvements is identified, an implementation plan is created which identifies the timing, cost, and funding sources of planned improvements.

A major feature of the master plan is the Airport Layout Plan (ALP). The ALP is PDK’s blueprint for the future and is updated and submitted to GDOT for approval. As a federal block grant state, GDOT reviews and approves the ALP on behalf of the FAA. Normally, GDOT’s approval of the FAA is “conditional”, meaning further steps may be required before a project is implemented, such as providing additional justification or determining environmental impacts.

The final products of the master plan are:

- Airport Layout Plan Drawing Set
- Master Plan Technical Report

1.6 Stakeholder Participation

This master plan includes a public involvement plan that was designed to involve airport users, the business community, planning partners, neighborhoods and the general public as airport stakeholders.



As participants in the master planning process, the airport stakeholders provide meaningful input to the airport as it develops its master plan. The public involvement effort strives to establish new forums for information exchange while also taking advantage of existing groups and organizations. Outreach techniques were designed to encourage participation in the public process and to generate meaningful feedback. The plan provides tools for both disseminating project-related information and gathering public input that reflects community concerns and interests.

The key components of PDK's Public Involvement Plan are:

- **Project Website.** A repository for project updates, project schedule, sign up for email updates, online surveys, and master plan documents. The website address is www.pdkmasterplan.com.
- **Goals/Vision/Existing Conditions Survey.** An online survey was conducted early in the project to learn various viewpoints of airport stakeholders which helped guide development of goals and objectives and master plan initiatives.
- **Citizen's Advisory Committee Meetings.** A Citizen Advisory Committee (CAC) was formed to serve as an advisory body for overall direction and guidance in the development of the master plan. The CAC consists of individuals appointed by the County Commissioners and the Mayors of Brookhaven, Chamblee, Doraville and Dunwoody who have an interest in the airport and its operations. The CAC meets regularly to discuss plan developments and to provide input at decision-making milestones.
- **Technical Advisory Committee Meetings.** A Technical Advisory Committee (TAC) was formed to provide the project team with guidance on key technical components of the project. The TAC is comprised of airport users with substantial knowledge of the technical aspects of the airport. Members of the TAC were appointed by airport management and represent corporate pilots, flight schools, PDK - Airport Association, FBOs airport businesses, PDK Air Traffic Control Tower, National Business Aircraft Association (NBAA), Aircraft Owners & Pilots Association (AOPA), and tie down/T-hangar tenants. Additionally, staff from the FAA and the GDOT were invited to participate.
- **Intergovernmental Advisory Committee Meetings.** An Intergovernmental Coordinating Committee (ICC) was formed to serve as a high-level, policy-oriented group to communicate the master plan process to the local governments within the airport vicinity. The ICC includes planning and/or economic development staff from the Cities of Brookhaven, Chamblee, Doraville and Dunwoody, as well as DeKalb County, MARTA and the Atlanta Regional Commission.
- **Public Workshops.** Workshops will be held at major milestones to disseminate project related information to a greater audience and to provide a question and answer forum.
- Updates and presentations to the **PDK Airport Advisory Board.**
- A presentation of the plan to the **DeKalb County Board of Commissioners.**



1.7 Master Plan Goals and Objectives

Goals and objectives of the master plan have been developed based on stakeholder input in accordance with the existing *PDK Airport Vision and Mission Statement* established by DeKalb County. These ideals are:

Airport Vision: PDK's vision is to be the Southeast's finest general aviation airport.

Airport Mission Statement: Provide for the operations of a business-oriented airport in a safe, efficient, and fiscally responsible manner. Preserve the quality of life of the community, investing into its employees, recognizing a partnership among residents, general aviation, and general aviation interests.

In support of these ideals, the master plan focuses on the following five objectives.

Objective 1. Modernization of Airport Facilities.

Much of the infrastructure at PDK was constructed by the military in the 1940s during WWII and during the 1960s through 1980s as the airport grew into a busy general aviation airport. These facilities should be evaluated for their current efficiency, function, and useful life. The master plan should outline how airport infrastructure would be improved over the next 20 years to adequately support the needs of stakeholders.

Objective 2. Insure and Enhance Compatible Land Use.

PDK is located in a highly desirable community of metropolitan Atlanta. The airport is within the City of Chamblee and adjacent to Brookhaven, Doraville, Dunwoody and Unincorporated DeKalb County. As part of the master plan process, communication of future plans, goals and objectives is essential in order to create and foster a mutually beneficial environment that increases PDK's equity as a community asset and improves quality of life for its citizens while also maintaining safe, efficient use of the airport.

Objective 3. Foster Economic Development and Strong Economic Tax Base.

PDK offers a transportation gateway that attracts desirable economic development to the community and provides a valuable tax base. PDK is the third largest payer of property taxes in DeKalb County. A 2012 economic impact study found that PDK's total economic output is more than \$211 million annually and supports 1,834 total full-time jobs. From 1978 to 2018, over \$83 million has been invested in capital improvements by PDK, GDOT, and the FAA. PDK should identify airside, landside, and airspace improvements and recommend options to further optimize the economic aspects of the airport while preserving compatible land use and enhancing the safety and operational capability of the airport.

Objective 4. Respond to Aeronautical Demand.

In support of PDK's vision to be the finest general aviation airport in the southeast, it is important that PDK understands and responds to the transportation needs of the community and makes necessary improvements to support this demand. This includes ensuring the airport facilities adequately serve the existing airport activity in a functionally efficient manner and establishes an implementation schedule for short, intermediate, and long-term improvements based upon the goals and objectives of the airport master plan.



Objective 5. Ensure Safety and Security of the Traveling Public.

Most importantly, the plan should identify improvements that ensure safety and security of the traveling public. This includes identifying improvements necessary to ensure that airport design guidelines are followed for runway safety areas, runway object free areas, runway protection zones, and obstructions to airspace. Advances in technology and safety guidelines should be reviewed to support potential improvements to airport lighting, airfield markings, taxiway geometry, fencing and access control, visual and navigational aids and enhanced poor weather safety.

1.8 Key Issues Discovered During the Master Plan

This section will be completed at the end of the master planning process and will describe key issues that were raised during the master plan development.

1.9 Summary of Proposed Improvements

This section will be completed at the end of the master planning process and will describe the specific improvements identified in the master plan.

DRAFT

Chapter 2 - Inventory of Existing Conditions

2.1 Introduction

The purpose of the inventory is to summarize existing conditions of all facilities at PDK as well as to summarize other pertinent information relating to the community, airport background, airport role, surrounding environment, and various operational characteristics. The information in this chapter provides the baseline for determining future facility needs. This chapter will provide an inventory of the following:

- Airport Characteristics,
- Airside Facilities,
- General Aviation Facilities,
- Airspace and Air Traffic Control,
- Environmental Considerations, and
- Zoning and Municipal Boundaries,

The necessary inventory data has been collected from various sources, including:

- Interviews with airport management,
- Interviews with airport users and tenants,
- Airport site visits,
- Research and review of previous airport planning analyses and studies, and
- Review of aerial photography, mapping, and city and county Geographic Information System (GIS) data.

2.2 Airport Characteristics

2.2.1 Meteorological Data

Due to the effect of weather on aircraft performance and airfield design, an overview of meteorological characteristics for the Chamblee area is presented in the following section.

Climate

The field elevation at DeKalb-Peachtree Airport is 998 feet above Mean Sea Level (MSL). Located north in the Piedmont region of Georgia, weather conditions are generally mild, characterized by warm summers and largely cool winters. According to the National Oceanic and Atmospheric Administration (NOAA), for period 1981-2010, the average temperatures range from 88.2° Fahrenheit (F) to 68.9° F during the summer. During the winter the temperatures range from 53.6° F to right about the freezing level at 34.8° F. The mean daily maximum temperature of the hottest month is 89.4° F.

Further information regarding airport wind conditions will be presented in Chapter 4, *Facility Requirements*.



2.3 Airside Facilities

The airside facilities support all arriving and departing operations of aircraft. Runways, taxiways, navigational aids (NAVAIDS), visual aids, signage, and lighting comprise the airside facilities.

2.3.1 Runways and Taxiways

The airport is served by three runways: Runway 3R-21L, Runway 3L-21R, and Runway 16-34. In addition, Helipad Charlie and a system of taxiways make up the airfield. These airside facilities are shown on **Figure 2-1**.

Runways 3R-21L and 3L-21R align with the prevailing winds and are the most utilized runways on the airfield. Runway 16-34 is primarily used to support smaller aircraft in crosswind weather conditions.

Airport runways are named using their magnetic compass orientation. Runway 3R-21L and Runway 3L-21R are aligned in a northeast/southwest 030°/210° direction. Since these runways are parallel, a left (L) and right (R) designation are added to each runway end. Runway 16-34 is aligned in a northwest/southeast 160°/340° direction. Over time, the runway naming designations will change due to drift of the magnetic north pole.

A fourth runway, Runway 9-27 was oriented in an east/west 090°/270° direction. The runway was closed in 2012 due to low utilization and the need for additional aircraft storage space.

[Runway 3R-21L](#)

Runway 3R-21L is a concrete runway measuring 6,001 feet in length by 100 feet in width. Runway 3R-21L has straight-in instrument approach procedures, which are necessary for poor weather conditions. The runway surface is grooved for better drainage and traction during wet conditions. For obstacle clearance, the landing threshold of Runway 21L is displaced 999 feet towards the south. In 2018, an Engineered Materials Arresting System (EMAS) was installed on the south end of the runway. EMAS is a bed of high energy absorbing materials that provide enhanced runway safety in the event of an aircraft overrun.

[Runway 3L-21R](#)

Runway 3L-21R is an asphalt runway measuring 3,146 feet long and 150 feet wide. Runway 3L-21R has a visual runway basic runway markings. Runway 3L-21R does not have displaced thresholds. No straight in instrument approaches serve this runway.

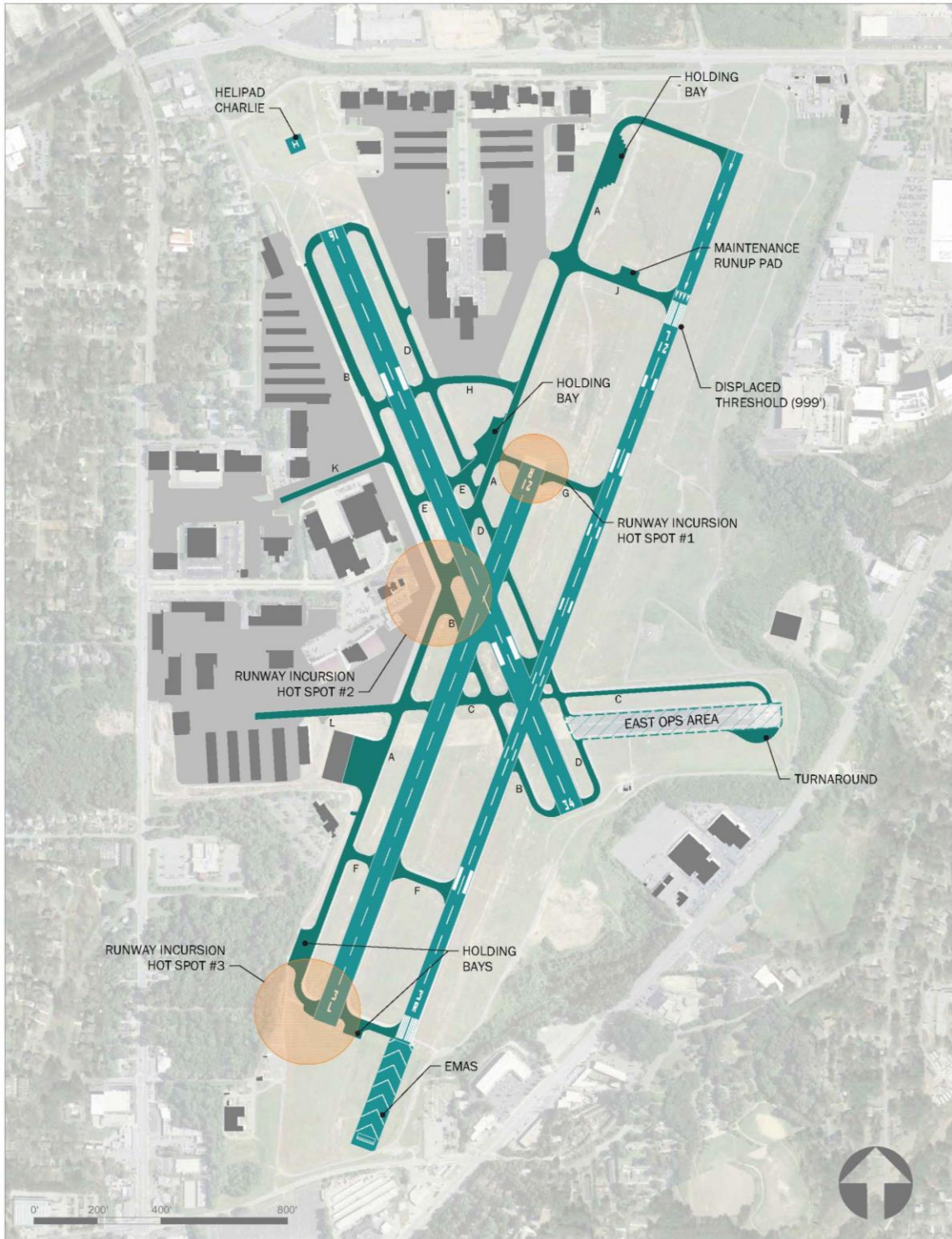
[Runway 16-34](#)

Runway 16-34 measures 3,967 feet in length and 150 feet in width and is constructed of asphalt. Runway 16-34 is a visual runway and has basic runway markings with touchdown points. Runway 16-34 does not have displaced thresholds. No straight-in instrument approaches serve this runway.

[Helipad Charlie](#)

Helipad Charlie measures 56 feet in length by 56 feet in width and is constructed of concrete. The helipad has a standard heliport identification symbol with Touchdown and Liftoff Area (TLOF) markings. No instrument approaches serve this runway.

Figure 2-1: Runways and Taxiways



Source: Michael Baker International, 2018.

2.3.2 Taxiway System

In addition to the runways, the airside facility at PDK consists of a taxiway system that provides access between the airside surfaces and the landside aviation use areas. These taxiways are depicted on **Figure 2-1**. All runways have parallel taxiways with a separation that varies but is at least 200 feet from runway centerlines. Taxiway A, located on the west side of the Runway 3L-21R is 50 feet wide. Taxiway B, situated on the west side of Runway 16-34, is 50 feet wide. Taxiway C, positioned across the central node of the airfield, is approximately 35 feet wide. Taxiway D, positioned on the east side of Runway 16-34, is 40 feet wide. The airport has seven additional connector taxiways that join the runways and parking apron areas. The taxiways are paved with a combination of asphalt or concrete in certain segments.

The taxiway system has runup pads near the thresholds of Runway 3L-21R and 3R-21L on Taxiways A and E. These runup pads allow pilots to conduct pre-take-off flight checks. In addition, a runup pad is located on Taxiway J, which is primarily used by aircraft undergoing engine maintenance checks.

The FAA Airport Diagram identifies three taxiway “hot spots” at PDK. Hot spots are locations designated for enhanced awareness of potential runway incursions. A runway incursion is an occurrence involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft. These hotspots are identified on **Figure 2-1**.

2.3.3 Pavement Strength and Condition

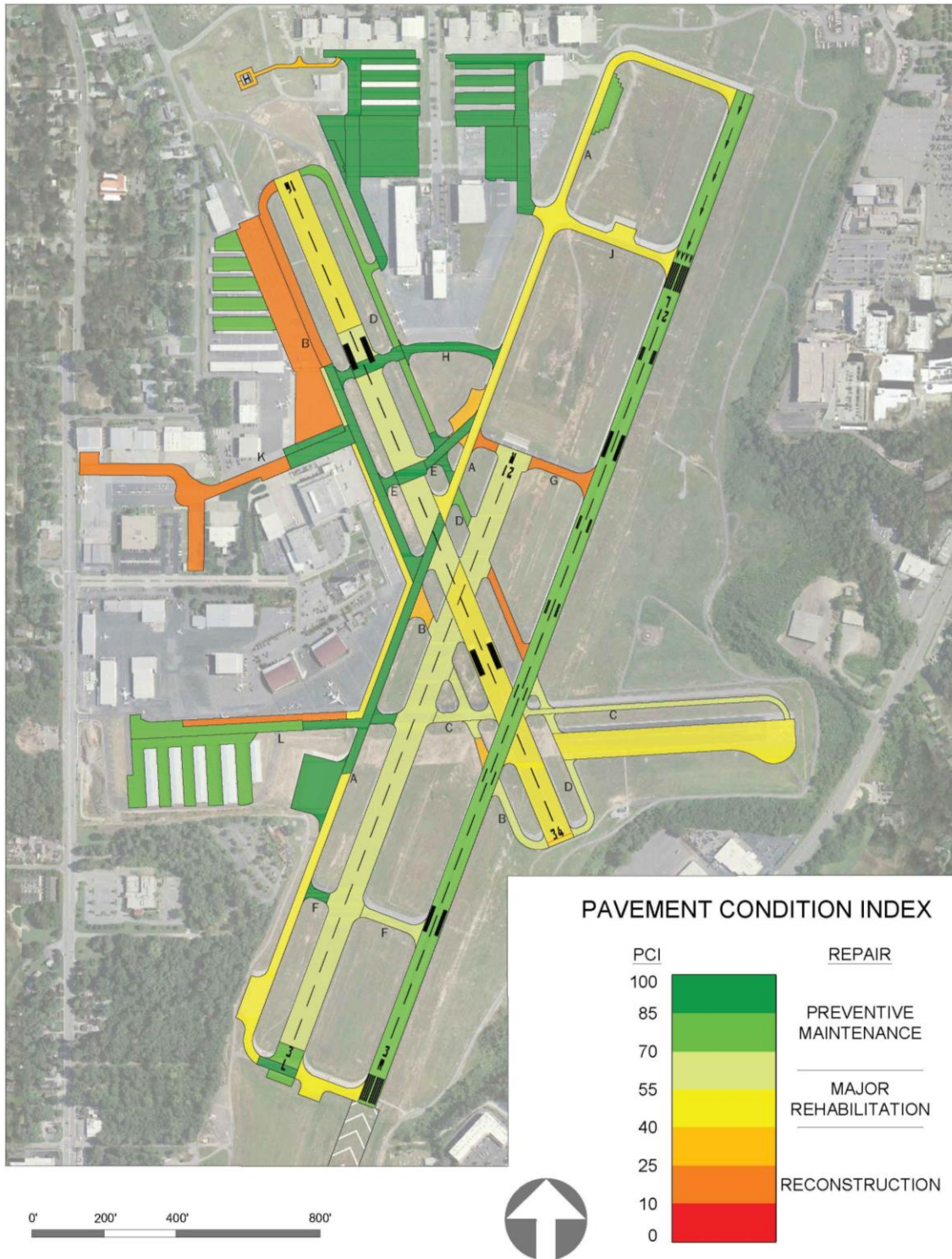
The integrity of pavement throughout airport property is crucial to ensuring safe and effective operations. Pavement strength requirements factor three key elements:

- Aircraft weight expected to use airport,
- Frequency of airport operations, and
- The landing gear geometry of each aircraft.

The Pavement Condition Index (PCI) is based on a visual inspection of pavement condition. The GDOT recently completed a statewide inventory of airport pavements in 2018. The draft findings were published in the 2019 Georgia Airport Pavement Management Report. Per the 2019 report, PDK had an overall PCI of 66.9. The runways had an average PCI of 65.2, the taxiways had PCI values ranging from 45 PCI to 81 PCI. On a 100-point scale, with 100 being perfect condition, the runway and taxiways are in good to fair condition. The apron areas and helipad had average 79.4 PCI. According to the report’s pavement condition distribution, reconstruction of 1,400,000 square-feet of pavement area out of 4,609,035 square-feet is recommended at PDK. This information is presented in **Figure 2-2**.

According to FAA’s 5010 Form, Airport Master Records, 2019, Runway 3L-21R and Runway 16-34 have a pavement strength of 20,000 pounds single-wheel loading. Runway 3R-21L has pavement strengths of 46,000 pounds single-wheel and 75,000 pounds dual-wheel loading.

Figure 2-2: Pavement Condition Index



Source: 2019 GDOT Pavement Condition Report.



2.3.4 Airfield Lighting and Signage

Standard airfield lighting is important for visibility and situational awareness at night and during periods of low visibility. A variety of lighting systems are installed at the airport for this purpose. Runway and taxiway edge lighting utilizes light fixtures placed near the edge of the pavement to define the side limits of the pavement. Runway and taxiway lighting at PDK are detailed below.

Runway Lighting

Runway 3R-21L has High Intensity Runway Lighting (HIRL), while Runway 3L-21R and Runway 16-34 are equipped with Medium Intensity Runway Lighting (MIRL). Runway 3R and Runway 34 also has Runway End Identifier Lights (REILs). The runway lighting is pilot activated via the Common Area Traffic Advisory frequency when the Airport Traffic Control Tower (ATCT) is closed.

Taxiway Lighting

Standard Medium Intensity Taxiway Lighting (MITL) are associated with all parallel and connector taxiways.

Airport Signage

The airport has a runway and taxiway signage system that assists pilots in identifying their location on the airfield and directing them to their desired location. Airport signage is a crucial component for safe and efficient airfield movement and circulation. The signage system utilized at PDK includes runway and taxiway designations, runway exits, holding positions, runway distance remaining, and directional signage.

2.3.5 Navigational Aids (NAVAIDs)

NAVAIDs provide visual and/or electronic guidance to pilots approaching the airport. PDK's NAVAID capabilities are described as follows.

Instrument Landing System (ILS)

Runway 21L is equipped with an ILS precision approach equipment, providing aircraft receivers with both horizontal and vertical electronic course guidance to the runway. The ILS equipment is comprised of an end-fire glideslope antenna (vertical course guidance) located on the eastside of Runway 21L, and a localizer antenna (horizontal course guidance) located directly off the end of Runway 3R. The current published approach minimums provide guidance to 1,334 feet MSL (400 feet Above Ground Level (AGL)) and 7/8 statute mile visibility.

Area Navigation (RNAV) and Global Positioning System (GPS)

RNAV non-precision approaches utilize GPS technology for horizontal course guidance. GPS is a space-based navigation system comprised of satellites, transmitting stations, and user receivers. An aircraft receiver can track the position of the aircraft by calculating and comparing the signal distance from several satellites. Aviation GPS equipment often depicts position and area information, such as airspace and terrain, on a moving map display in the cockpit. Because no ground facilities are required at airports to operate this navigational system, the system is reliable in all weather conditions and all terrain and is typically accurate to within 100 feet.



Wide Area Augmentation System (WAAS) is a GPS-based navigation system, which augments the existing GPS signals with additional information, providing the user highly accurate position and tracking information. Localizer Precision with Vertical Guidance (LPV) instrument approaches utilize WAAS technology to provide both vertical and horizontal course guidance to aircraft receivers. Like RNAV GPS navigation, LPV and other future WAAS approaches are available in all weather and all terrain conditions.

Runway 21L has two RNAV/GPS approaches. The 21L RNAV (GPS) Y instrument approach provides guidance down to 1,461 feet MSL (500 feet AGL) and 1-1/4 statute mile visibility. The 21L RNAV (RNP) Z instrument approach provides guidance down to 1,502 feet MSL (600 feet AGL) and 1 3/8 statute mile visibility. Runway 3R is not WAAS capable and has an RNAV approach with 1,334 feet MSL (400 feet AGL) and 1 statute mile visibility minimums.

There are no GPS LPV approaches at PDK.

Runway 3L-21R and Runway 16-34 solely provide visual approach capabilities.

Very High Frequency Omni-directional Range (VOR)

VORs are ground based navigation stations which emit both a steady 360° signal, as well as a rotating 360° signal. These signals are compared by the aircraft receiver to determine aircraft position, and course information is transmitted to the cockpit instruments.

At PDK, a VOR/Distance Measuring Equipment (DME) non-precision approach to the airport is based on the Peachtree VOR (identifier PDK), located on the eastside of Runway 21L end. This approach provides guidance down to 1,600 feet MSL (700 feet AGL) and one statute mile visibility. The approach is a circling approach, meaning it does not provide a straight-in approach to a specific runway end, rather, it brings an aircraft to the airport from the east and the aircraft must circle to a runway once visual contact is established.

As stated in Federal Register /Vol. 81, No. 143 issued July 26, 2016, the PDK VOR is listed as a candidate for discontinuance in FAA Fiscal Years (FY) 2021-2025. Recent correspondence with the FAA indicates that the VOR will likely be decommissioned in 2022. A RNAV A procedure is proposed by FAA to serve as an overlay replacement to the VOR procedure upon its cancellation.

Table 2-1 summarizes the Instrument Approach Procedures at PDK and the lowest descent minimums and lowest visibility minimums for each approach. Descent and visibility minimums will vary based on the technical requirements of each approach.



Table 2-1: Instrument Approaches

Approach Type	Runway Ends Served		Lowest Descent Minimums (Lowest AGL and Visibility)	
	21L	3R	21L	3R
ILS or LOC	●		ILS: 400 ft & 7/8 sm LOC: 500 ft & ¾ sm CIR: 600 ft & 1 sm	
RNAV (RNP)		●		RNP.10: 400 ft & 1 sm RNP.30: 500 ft & 1 3/8 sm
RNAV (RNP) Z	●		RNP.30: 600 ft & 1 3/8 sm	
RNAV (GPS) Y	●		LNAV/VNAV: 500ft & 1 ¼ sm LNAV: 600 ft & ¾ sm CIR: 600 ft & 1 sm	
VOR	Circling Only	Circling Only	700 ft & 1 sm CIR	700 ft & 1 sm CIR

Source: FAA instrument procedures published for use from 31 January 2019 to 28 February 2019.

2.3.6 Airfield Visual Aids

Visual aids at an airport provide additional information for identification and safe operation. Shown in **Figure 2-3**, PDK is equipped with a rotating beacon, a wind cone, and precision approach path indicators (PAPIs) for visual cues of airport conditions.

Rotating Beacon

A rotating beacon is located west of Runway 3R-21L. High intensity lamps mounted on an assembly rotate 360° every six seconds, giving the illusion of emitting flashes of light. The designation for PDK, a civilian land airport, is alternating green and white lights in equal duration. The rotating beacon is operational from sunset to sunrise and during Instrument Meteorological Conditions (IMC).

Wind Cone

A lighted wind cone is located just north of Taxiway D and east of Runway 21R. It provides visual surface wind information to pilots. Since the airport has an ATCT, the wind cone does not have a segmented circle to indicate airport traffic pattern. Supplemental wind cones are found near the touchdown points of Runway 3L, 2R and on top of a helicopter hangar near Helipad Charlie.

Precision Approach Path Indicators (PAPIs)

Runway 16-34 is equipped with four-box PAPIs located on the left side of each runway threshold. Runway 3L-21R has two-box PAPIs. Runway 3R-21L has a four-box PAPI on the left and two-box PAPI on the right.



These landing aids help pilots to visually establish their aircraft on the proper approach glide path for landing by emitting a row of red and white lights that indicate when the aircraft is vertically aligned properly with the runway. A four-box PAPI system emits three to four white lights if the aircraft is higher than the glide path and three to four red lights if the aircraft is lower than the proper glide path, indicating to the pilot an adjustment of altitude is needed.

2.3.7 Weather Reporting Facilities

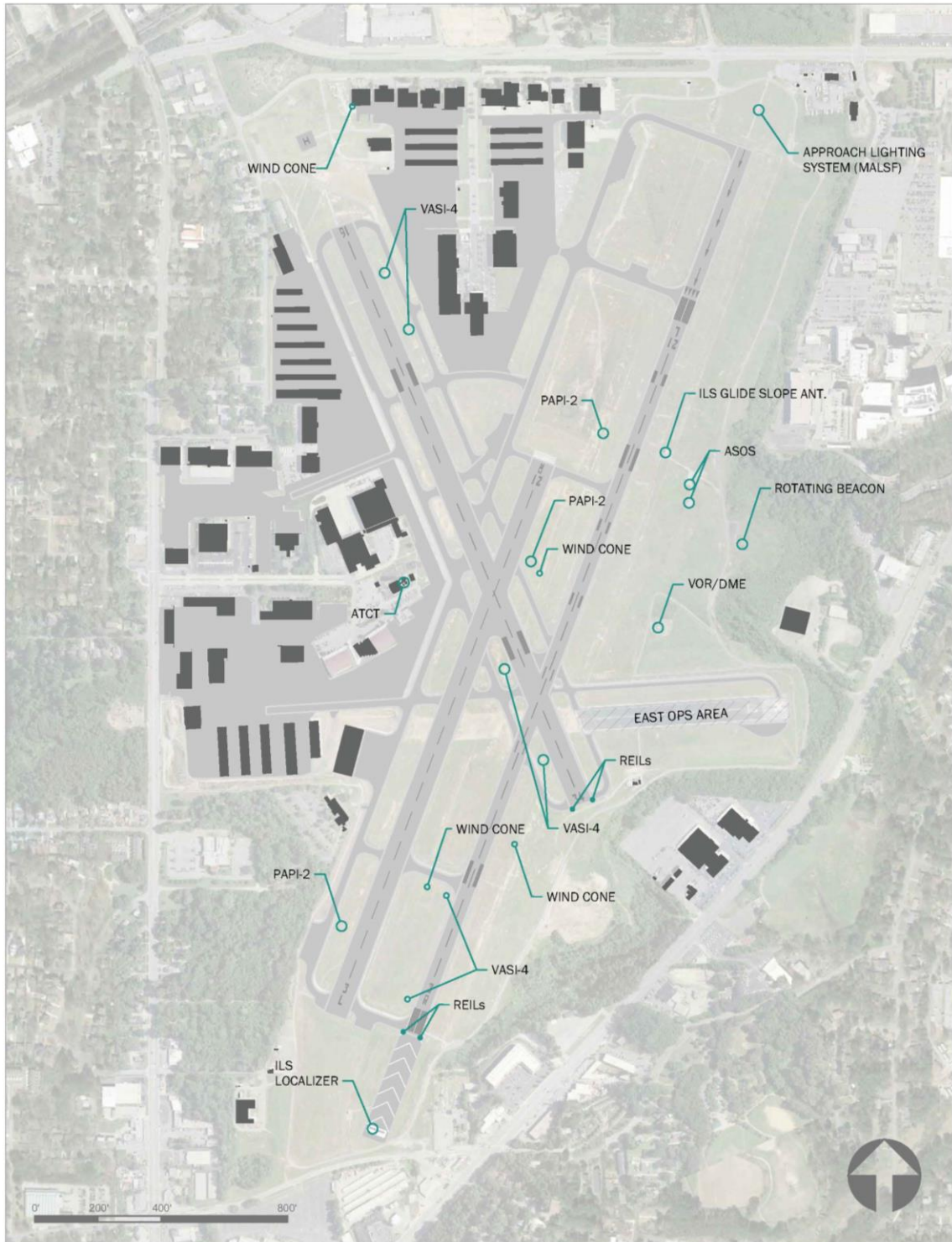
The airport is equipped with an Automated Surface Observing System (ASOS) weather reporting system, located east of Runway 3R-21L near the rotating beacon. The ASOS is a modern weather collection and reporting system which measures the following meteorological conditions:

- Wind velocity and direction,
- Temperature and dewpoint,
- Visibility,
- Cloud cover and sky conditions,
- Barometric pressure, and
- Prevalent weather conditions (fog, thunderstorms, rain).

The ASOS equipment gathers meteorological data every minute and automatically transcribes current conditions via a designated radio frequency. The conditions are also available via telephone and aviation weather websites.

DRAFT

Figure 2-3: NAVAIDs



Source: Michael Baker International, 2018.



Table 2-2 provides a summary of existing airside facilities.

Table 2-2: Summary of Existing Airside Facilities

Item	Existing Condition			
Airport Role	FAA - GA/National GASP - Level III			
Airport Elevation	988 ft			
Airport Property	745 ac			
Max Mean Temp. of Hottest Month	89.4° F (July)			
Airport Reference Point	33-52-32.2 N, 84-18-07.1 W			
Magnetic Declination	5° 14' W changing by 0° 3' W per year (2019)			
Instrument Approach Procedures	ILS; LOC; RNAV; GPS; VOR-DME			
Weather Reporting	ASOS			
	Runway 3R-21L	Runway 3L-21R	Runway 16-34	Helipad Charlie
Runway Length	6,001 ft	3,746 ft	3,967 ft	n/a
Runway Width	100 ft	150 ft	150 ft	56 x 56 ft
Pavement Type	Concrete - Grooved	Asphalt	Asphalt	Concrete
Strength	SW - 46,000 lbs DW - 75,000 lbs	SW - 20,000 lbs	SW - 20,000 lbs	n/a
Effective Gradient	0.20%	0.40%	0.20%	n/a
Lighting	HIRL	MIRL	MIRL	PERI
Marking	Precision	Basic	Basic	Standard
Taxiway Pavement Type	Asphalt and Concrete			
Taxiway Width	40-50 ft			
Taxiway Lighting	MITL			
Source: Michael Baker International, 2019. Max. Mean Temperature of the hottest month determined from the 1981-2010 U.S. Climate Normal station USW00053863				



2.4 General Aviation Facilities

Landside facilities are the based facilities that support the travelers, pilots, and aircraft handling functions. Facilities include the administration building, fixed base operators (FBOs), aircraft maintenance, aircraft hangars, aircraft fueling facilities, aircraft apron parking, vehicle parking and emergency services. These facilities and businesses support and provide services for aircraft operators at the airport. Landside facilities at PDK are shown in **Figure 2-4**.

2.4.1 Airport Businesses

PDK is home to over 25 prominent businesses including aeronautical and non-aeronautical organizations. Businesses include Epps Air Service, Atlantic Aviation, Signature Flight Support, Hertz car rental, Pilot Stuff Supplies and Accessories, a provider of aviation supplies; Hertz, car rental facility; and Angel Flight, a group of volunteer pilots that provide medical related flights to patients.

There are ten flight schools and one helicopter flight school currently based at PDK. All flight schools offer a comprehensive flight training programs for career and recreational pilots.

[DeKalb County](#)

DeKalb County Airport Division provides airport operational and management supervision of the airport facility and is responsible for overall maintenance of PDK grounds as well as leasing tiedowns, aircraft hangar rentals, and land lease-holds throughout the property. Several county T-hangar buildings and tiedowns are found on the north, northwest, and west side of the airfield.

2.4.2 Fixed Based Operation (FBO) and Fuel Storage

A full range of services are available at PDK. This includes aircraft fueling, flight training, aircraft maintenance, aircraft storage, and many other services. The airport is served by three full-service FBOs, Atlantic Aviation, Epps Aviation and Signature Flight Support. The airport also has one partial service FBO which is PDK Self-Serve Avgas.

[Atlantic Aviation](#)

Atlantic Aviation is a full-service FBO that provides a variety of general aviation services. Atlantic Aviation is located on the west side of Runway 3L-21R adjacent to the ATCT. At the time of this study, Atlantic Aviation is currently in the process of demolishing two of their conventional hangars and terminal building and constructing a new 17,097 square-foot terminal in its place. Aside from their new terminal building, Atlantic Aviation operates out of approximately 61,681 square-foot facility spread over five hangar buildings that provides offices, aircraft space, pilot lounge, and type I deicing services located southwest portion of the airport. Atlantic Aviation provides full-service Jet A and Avgas fuel.

[Epps Aviation](#)

Epps Aviation is the first full-service host FBO to service PDK since 1965. It operates out of the northwest portion of the airport adjoining the Administration Building where they service their main customers out of an approximate 51,122 square-feet of office and hangar building. Epps Aviation maintains four corporate hangars, an executive hangar, three T-hangars, and a maintenance hangar engrossing approximately 178,795 square-feet. In 1996, Epps Aviation became an authorized sales and services



provider for Pilatus aircrafts marketing to U.S. Southeast and Canada. The company serves full-service Jet A and Avgas fuel 24 hours per day.

Signature Flight Support

Signature Flight Support is the third full-service FBO housed at PDK and is located north on the airfield between Runway 16-34 and Runway 3L-21R. Signature's services and amenities include conference rooms, passenger lounge, flight planning, aircraft maintenance, aircraft charter, deicing, fuel and more. Signature encompasses 87,650 square-feet of hangar and office space and subleases 94,000 square-feet of ramp.

2.4.3 Airport Administration

The airport administration office is located on Airport Road near the ATCT. These facilities include the Airport Director's Office, Security Office, Noise Information Office, and conference rooms. The Administration Building also houses several businesses including flight schools, Bird Bath, Angel Flight of Georgia, and an airport restaurant, The Downwind.

2.4.4 Airport Maintenance

The PDK airport maintenance building is in the southwest corner of airport property perpendicular to Runway 3L. The area includes a building and maintenance area to store maintenance supplies, equipment, and vehicles. The maintenance building was construction in 2001 and includes 16,087 square feet of floor space.

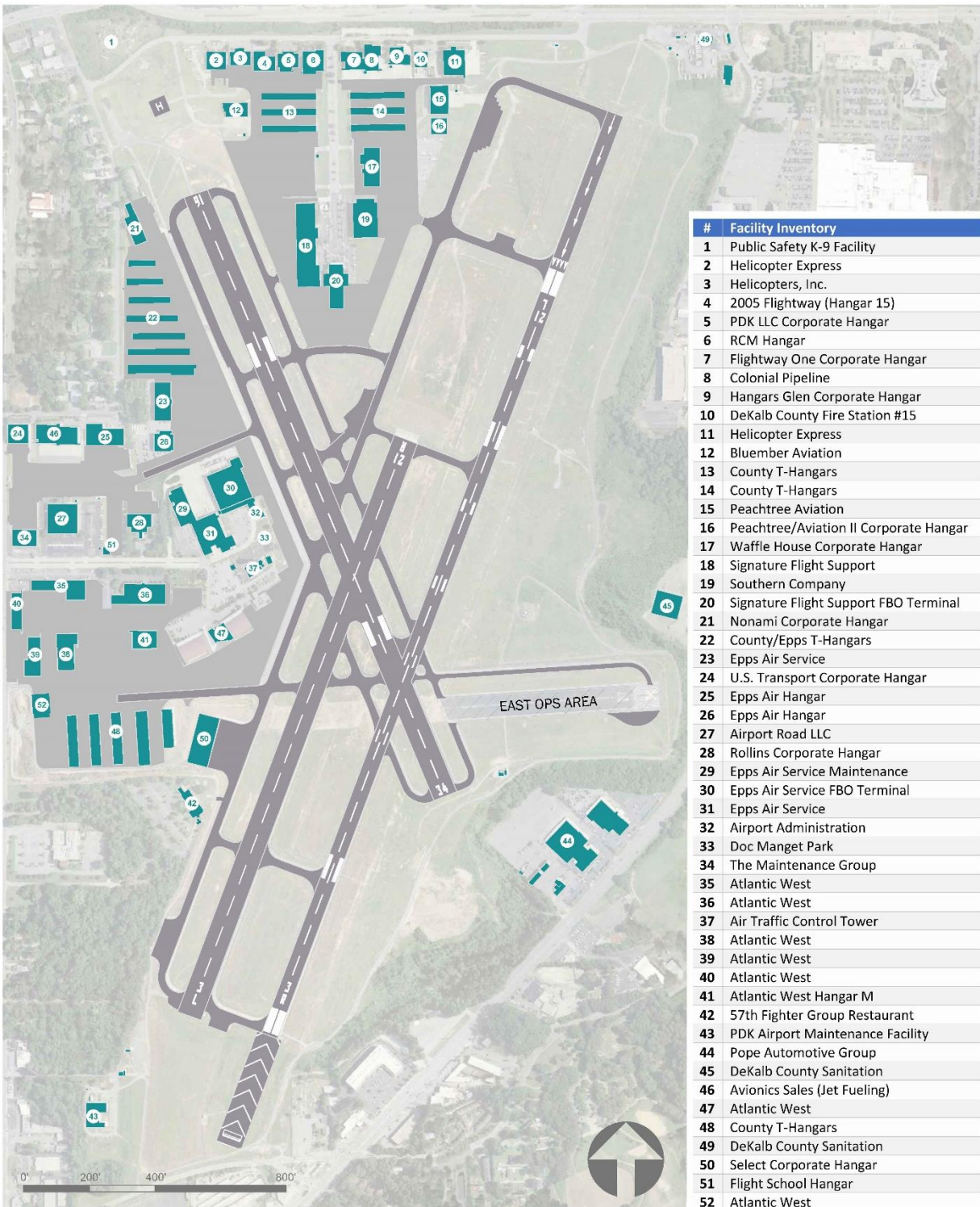
2.4.5 Emergency Services

DeKalb County Fire-Rescue Services, identified as Station 15, is located within the north portion of Airport property on Flightway Drive. Since PDK is not a FAR Part 139 certified airport (i.e., air carrier), a dedicated Airport Rescue and Fire Fighting (ARFF) station is not required but PDK benefits greatly from the location of the station at the airport. Station 15 not only provides fire and rescue services at PDK but to the surrounding community as well.

Today, Station 15 houses the office of the Battalion Chief; Engine 15, a structural fire response truck and a Rosenbauer Panther 4X4 Aircraft Rescue and Firefighting (ARFF) fire truck. The all-terrain ARFF truck carries 1,500 gallons of water which is mixed with Aqueous Film Form Foam (AFFF) fired from bumper and roof turrets. Also, the ARFF truck carries 500 pounds of what is called Purple "K" or "PK" which is a dry chemical that smothers an aircraft fire similar to AFFF.

Station 15's direct access to PDK's ramps allows quick access to the airfield in the event of airport emergencies.

Figure 2-4: Facility Inventory



Source: Michael Baker International, 2018.

2.4.6 Aprons

General aviation aprons also known as ramps, provide a location for based aircraft storage, loading and unloading passengers, FBO operations, and itinerant aircraft storage. Because aprons endure a variety of activity, they should be designed to allow for a changing mix of transient and parked aircraft. A few key elements that effect apron design include ground equipment access, aircraft circulation and characteristics, safety, obstruction and visual clearance.

There are five aircraft apron areas at PDK shown in **Figure 2-5**, located in the northern and western regions of the airport. Together, these ramps consist of 364,166 square yards of allowable space for aircraft circulation and storage.

West Ramp

The West Ramp is located immediately south of the ATCT. The apron is approximately 135,775 square yards of paved surface. It is leased to and operated by Atlantic Aviation, one of the airport's FBOs, to store itinerant and based aircraft.

Clairmont Ramp

Clairmont Ramp is located at the corner of Airport Road and Clairmont Road near the main entrance of the airport. This apron is about 31,729 square yards in size and is used for aircraft tie-downs that accommodate a variety of aircraft sizes.

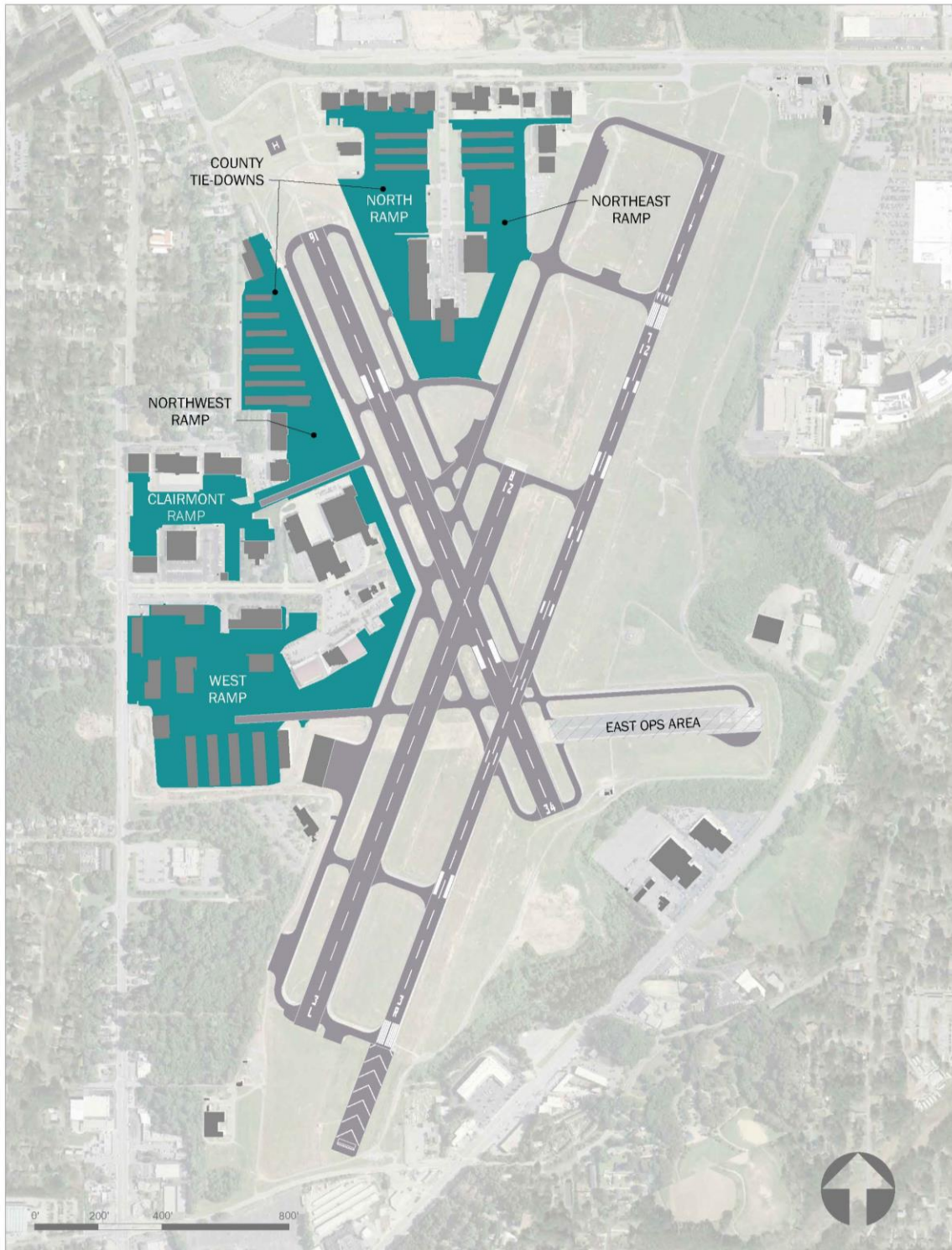
Northwest Ramp

The Northwest Ramp is located immediately north of the ATCT. The ramp area adjacent to the Airport Administration Building is used exclusively Epps Aviation. This apron space, measuring 79,617.5 square yards, services large-to-medium size jets and small aircrafts. The northern portion of the Northwest ramp provides aircraft parking for based aircrafts leased from DeKalb County.

North and Northeast Ramps

Collectively, the North and Northeast Ramp are located north on within Airport property and together total 117,043 square yards. They are used for tiedown spaces, aircraft maneuvering and transient aircraft parking. There is approximately 57 tiedown spaces in this combined ramp area. Signature Flight Support, which is the third FBO housed at PDK, leases the ramp area adjacent to Taxiway H while DeKalb County T-hangars and tie-down sit north of Signature Flight Support.

Figure 2-5: Aprons



Source: Michael Baker International, 2018.



2.4.7 Auto Parking

There are several vehicular parking lots available at PDK. The two public parking lots are located adjacent to the Administration Building and ATCT, both individual lots consisting of 71 spaces, totaling 142 spaces.

2.4.8 Airport Access

Regional access to PDK is provided from Interstate 85 approximately two miles east of PDK and Interstate 285 Interchange approximately three miles northeast of PDK which intersects with Interstate 85 northeast of PDK. PDK is bordered by Clairmont Road to the west; Dresden Drive NE to the south, Buford Highway NE to the east and Chamblee-Tucker Road along the northern side of the airport. New Peachtree Road connects Clairmont Road and Chamblee-Tucker Road northwest of PDK. The Metropolitan Atlanta Rapid Transit Authority (MARTA) station sits at the intersection of Peachtree Road and Chamblee-Tucker Road.

There are two primary vehicular access points to PDK. The main entrance is at Clairmont Road and Airport Road which navigates to the Administration Building. Corsair Drive runs from Flightway Drive and anchors where Signature Flight Support FBO is located.

2.4.9 Airport Utilities

The availability and capacity of the utilities serving the airport are factors to determining the development potential of the airport, as well as the land immediately adjacent to the facility. Utility availability is critical especially when considering future airport expansion abilities for both landside and airside.

The airport utilities include electrical, natural gas, water and sewer, and telephone service. Georgia Power provides electrical power for the airport. DeKalb County Watershed provides water, sewer and wastewater management to the airport. Atlanta Gas Light provides natural gas service and AT&T provides telephone services.

Access to utilities are readily available in the existing general aviation terminal areas.

2.4.10 Airport Waste and Recycling Facilities

Airport waste management and recycling facilities are provided by DeKalb County Watershed.

2.5 Airspace and Air Traffic Control

The FAA is responsible for the control and use of navigable airspace within the United States. The FAA has established the National Airspace System (NAS) in efforts to protect persons and property on the ground and to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS is made up of a network of air navigation facilities, Air Traffic Control (ATC) facilities, airports, technology, and appropriate rules and regulations that are needed to operate the system.

Airspace is broken down into two categories: regulatory and non-regulatory. Within the regulatory airspace category, there are two types of airspace: controlled and uncontrolled. Categories and types of airspace are defined based on their complexity or density of aircraft movement, or the nature of the operation conducted within the airspace, which dictates the level of safety required and the level of national and public interest.



The purpose of controlled airspace is to provide adequate separation between IFR and VFR aircraft, thus, IFR services are available, but not required, within all controlled airspace.

DeKalb Peachtree Airport resides inside a complicated metropolitan airspace environment as shown on **Figure 2-6**. Immediately within the vicinity of PDK are several airports, including Gwinnett County Airport (LZU) east of the PDK near Lawrenceville; Dobbins Air Reserve Base/Naval Air Station (MGE) and Cobb County Airport (RYY) both northwest of PDK in Marietta; and Fulton County Airport (RYY) west of PDK near Mableton. Excluding MGE, each of these airports serves as a general aviation reliever for ATL, located south of PDK near College Park. ATL, being the world's busiest airport, is enclosed within Class B airspace. The structure of this airspace resembles an upside-down wedding cake and is tailored to meet ATL's requirements. At the center, the airspace structure extends from the surface to 12,500' MSL. Further from the center, the floor of the airspace begins at progressively higher levels ranging from 2,500' MSL up to 10,000' MSL. Class B airspace stipulates certain operating rules and pilot/equipment requirements.

In the vicinity of PDK, ATL's Class B airspace begins at 5,000' MSL in the south quadrant, 6,000' MSL in the east quadrant and 7,000 ft in the west and north quadrants. Because PDK has an air traffic control tower, Class D airspace, centered on PDK, extends from the surface to 3,500' MSL. Class D airspace has specific operating rules and equipment requirements. The radius of PDK's airspace is approximately 5 statute miles. During the hours PDK's air traffic control tower is closed, the airspace at PDK and its vicinity changes to a combination of Class E and G airspace. Class E airspace at PDK during those periods begins at 700' AGL with Class G airspace underlying it. More detailed information regarding classes of airspace and their use may be found in the FAA publication *Aeronautical Information Manual, Chapter 3 - Airspace*.

Air traffic control requirements generally specify aircraft departing or arriving at PDK must establish two-way communications with PDK ATCT during the hours of the facility's operation. Furthermore, if the aircraft is flying Instrument Flight Rules (IFR), the pilot will also communicate with Atlanta Terminal Radar Approach Control (TRACON) enroute to or from the airport.

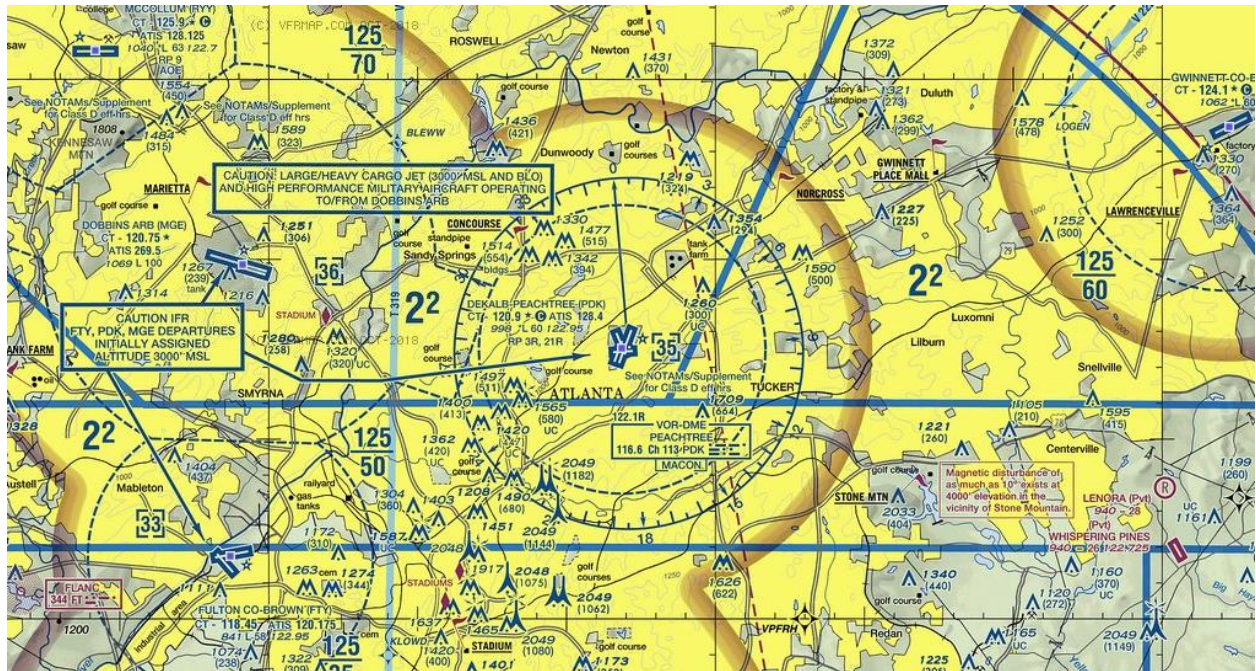
Tower controllers issue a variety of instructions to pilots, including specifying entry navigation into the air traffic landing pattern, to departure instructions toward an intended route of flight. With respect to IFR departures, PDK ATCT will typically assign a specific runway, heading, and altitude for the aircraft to follow until the ATC services for that aircraft are transferred to Atlanta TRACON. Atlanta TRACON then vectors the aircraft to its enroute segment of flight.

PDK ATCT operates from 6:30 a.m. to 11:00 p.m. Monday to Friday and from 7:00 a.m. to 11:00 p.m. on Saturday and Sunday, local time. During the hours PDK ATCT is closed, the pilot intending to fly IFR will either receive clearance from Atlanta TRACON on the ground prior to take-off, or in the air upon taking off flying VFR. The specific departure procedures given by PDK ATCT and Atlanta TRACON for departing IFR aircraft are related to the Standard Operating Procedures signed between the two entities.

In addition to airspace classifications and ATC responsibility, a notable airspace feature is the presence of tall towers south of the airport. The tallest towers are found south of the intersection of Interstate 85 and Highway 400 in areas commonly referred to as Druid Hills, Northwest Decatur, and East Atlanta neighborhoods. The tallest towers stand 2,049' MSL and are greater than 1,100' AGL.

To the south, under IFR, ATC has responsibility for traffic deconfliction and obstruction avoidance, and therefore will normally turn aircraft expeditiously to avoid both the tall obstructions and traffic flow related to ATL. Under Visual Flight Rules (VFR), the pilot is responsible for maintaining separation from other aircraft and to remain clear of obstructions.

Figure 2-6: Airport Airspace



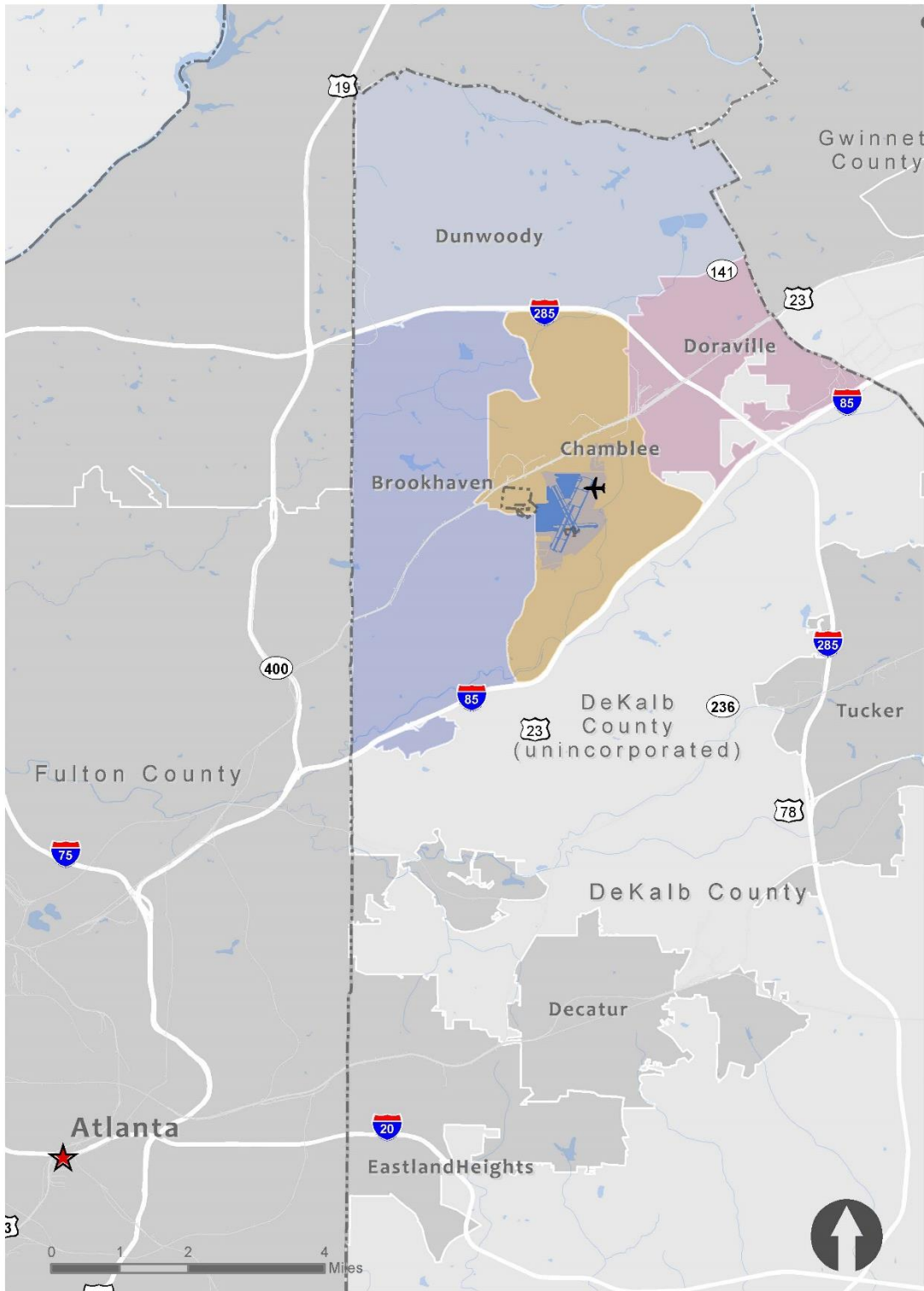
Source: FAA Air Traffic, Atlanta Sectional Chart, 2019.

2.6 Zoning and Municipal Boundaries

Municipal Boundaries

PDK is located within I-285 (Perimeter) in the city limits of Chamblee in DeKalb County approximately 10 miles from downtown Atlanta. Located in Northern DeKalb County, the city of Chamblee is adjacent to Dunwoody to the north, Doraville to the northeast and Brookhaven to the west. In efforts to boost a pro-business environment and develop influential solutions to the local region’s economy city leaders from the four municipalities has established a multi-city public-private planning organization titled the Peachtree Gateway Partnership (PGP) in 2016. PDK’s municipal boundaries are depicted in **Figure 2-7**.

Figure 2-7: Municipal Boundaries



Source: Michael Baker International, 2018.



Zoning

As part of grant assurances to the FAA, the airport is required, to the extent reasonable, to adopt zoning laws and restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft.

Existing zoning adjacent to the airport property varies from residential to light industrial. Zoning north of the airport property consists of multi-family residential and commercial properties. Zoning to the east of the airport property consists of light industrial, heavy commercial, single-family residential, and multi-family residential. The southern and western boundaries of the airport property are adjacent to heavy commercial properties.

Height Zoning

Federal Aviation Regulation (FAR) Part 77, *Objects Affecting Navigable Airspace*, establishes standards and notification requirements for objects affecting navigable airspace. Part 77 establishes the standards for “imaginary” surfaces in relation to the airport and to each runway. The size of each surface is based on the type of approach available or planned for that runway.

DeKalb County Code of Ordinances Section 6-218 establishes the “Zones.” This ordinance protects the airport’s Part 77 imaginary surfaces by defining the surfaces and establishing the procedures for removal or marking of objects that penetrate the surfaces, and the penalties associated with the violation of the surfaces. Additionally, the ordinance identifies land uses and zoning designations that are compatible within the airport operations areas. A copy of the ordinance is provided in **Appendix A**.

The City of Chamblee has a Runway Protection Zone (RPZ) overlay district codified in Section 220-1 of their municipal code. This ordinance protects the airport’s RPZ and identifies compatible land uses within the airport the RPZ boundary. A copy of the ordinance is provided in **Appendix B**.



2.7 Environmental Considerations

The protection and preservation of the local environment are essential concerns for the master planning process. The final section of this chapter provides a review of environmental sensitivities that could factor into recommendations of future improvements at PDK. For any project that includes a federal action, the project must be reviewed for environmental considerations in accordance with the National Environmental Policy Act (NEPA). This overview follows the guidelines of FAA Orders 1050.1F and 5050.4B, and reviews the following environmental factors:

- Air Quality,
- Biological Resources,
- Climate,
- Coastal Resources,
- Department of Transportation Act, Section 4(f),
- Farmlands,
- Hazardous Materials, Solid Waste, and Pollution Prevention,
- Historical, Architectural, Archaeological, and Cultural Resources,
- Natural Resources and Energy Supply,
- Noise and Compatible Land Use,
- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks,
- Visual Effects (including light emissions), and
- Water Resources (including floodplains, wetlands, groundwater, surface waters and rivers).

Available information about the existing environmental conditions at PDK has been derived from current and former field investigations. These field investigations were undertaken to evaluate the presence/absence of various environmental resources near a project being proposed at the time of the survey. This environmental overview provides a more general description of the environmental constraints located on and adjacent to the airport property. Further analysis of these considerations will be presented in later sections of the master plan.

2.7.1 Air Quality (g)

The oversight of air quality conditions at PDK is the responsibility of the U.S. Environmental Protection Agency (EPA), the Georgia Department of Natural Resources – Environmental Protection Division (GDNR-EPD), and the Capital Region Planning Commission (CRPC) under the federal Clean Air Act (CAA). The U.S. EPA establishes, enforces, and periodically reviews the National Ambient Air Quality Standards (NAAQS) and approves State Implementation Plans (SIPs) that will demonstrate compliance with the NAAQS.

Each future project at the Airport must be evaluated for its potential to result in increased emissions of six common air pollutants. Specifically, each project must be evaluated for its potential to result in increased air emissions from both a project construction standpoint and an airport operations standpoint. If the project is determined to be below the de minimis thresholds established for each of the six criteria pollutants, then no mitigation is necessary. However, if it is determined that implementation of the project would result in increased air emissions that exceed the de minimis thresholds, then mitigation measures must be considered to ensure that the project is in compliance with the CAA.



2.7.2 Biological Resources

Plant Communities

For each of the future planned projects at the Airport described in this master plan the Proposed Action must be evaluated for its potential to result in adverse impacts to the existing plant communities, local wildlife, and fish communities. The Airport property encompasses an area of approximately 745 acres. The airport property includes four main habitat types: developed lands (including all runways, taxiways, aprons, structures, and parking lots), mowed/maintained habitat, scrub/shrub habitat, and mixed pine-hardwood forest habitat shown in **Figure 2-8**.

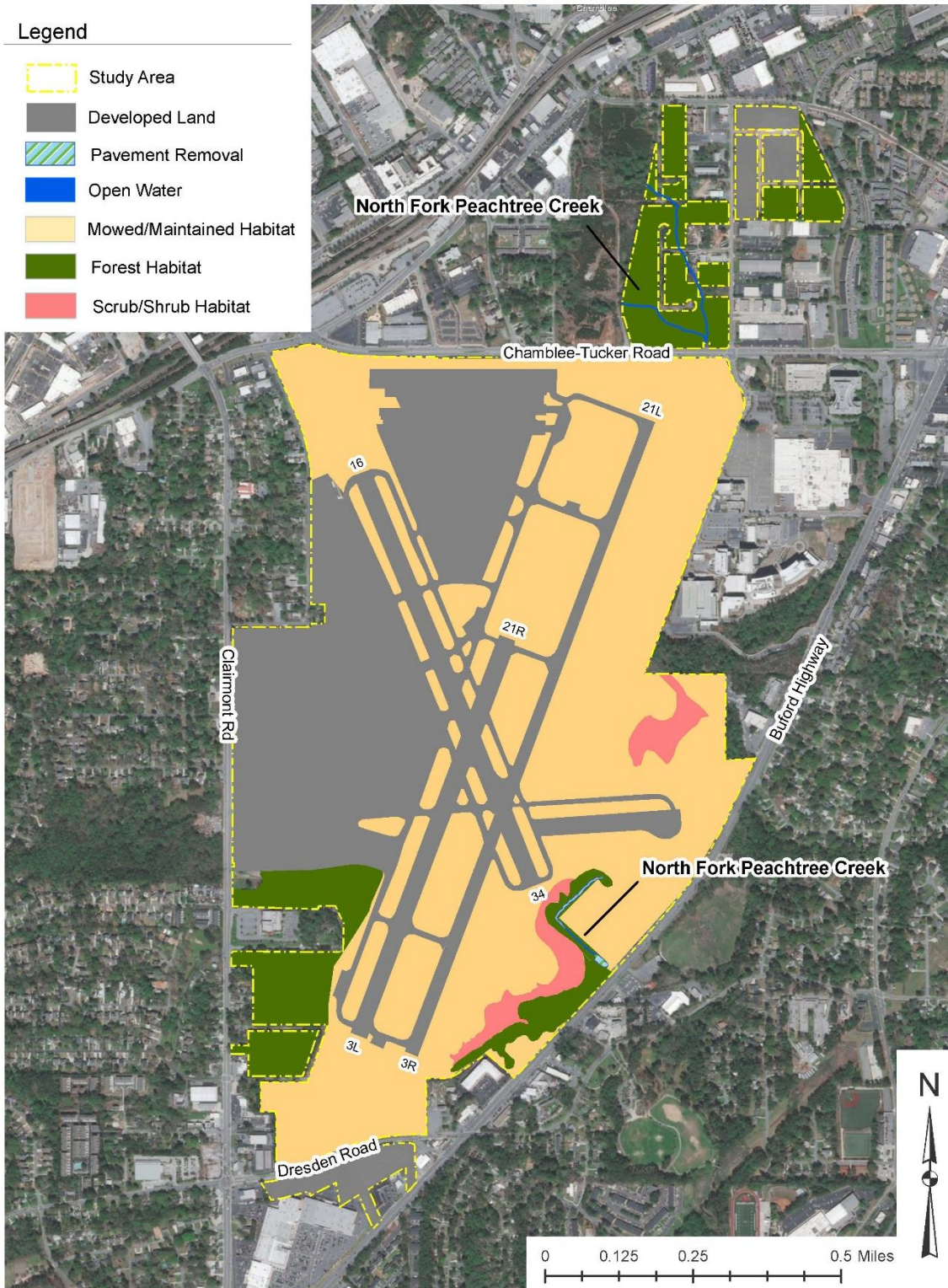
The general aviation areas located along the western boundary contains the largest amount of developed lands on the property. This portion of the property contains an extensive network of aprons, vehicular parking lots, several T-hangars, various sized corporate hangars, administrative buildings, an ATCT and several offices of aviation-related businesses. The northern portion of the property also contains a large area of developed lands. This area contains large aircraft aprons, six T-hangars, several corporate hangars of various sizes, and office buildings for several aviation-related businesses.

In between the paved surfaces, the airfield consists of mowed/maintained habitat. This habitat type consists mostly of emergent grass communities including non-woody, herbaceous species. The airfield is mowed on a consistent basis to prevent woody vegetation from becoming established and resulting in the creation of air navigation obstructions. This habitat is also maintained in order to reduce the attraction of these areas to wildlife species that prefer habitats that contain thick, tall grassy meadows.

Along the northeast boundary of the property, north of Chamblee-Tucker Road, there is an undeveloped parcel owned by the Airport that consists of pine-hardwood forest and developed habitats. This area also contains an intermittent stream resource, an unnamed tributary to North Fork Peachtree Creek. The eastern boundary of the airport property consists mostly of mowed/maintained habitat and scrub/shrub habitats east of the perimeter access road. Two segments of North Fork Peachtree Creek are located on existing Airport property. The first segment is approximately 2,400 feet long and it is located within the undeveloped parcel north of Chamblee-Tucker Road. The second segment meanders onto the Airport property just south of the CDC building. Approximately 1,100 linear feet of this segment is located on the property before the resource flows towards the southeast and underneath Buford Highway where it leaves the Airport property.

The southwest portion of the Airport property consists of mostly mowed/maintained and scrub/shrub habitats; however, there is some mixed pine hardwood-forest habitat located adjacent to Buford Highway and along both sides of Bragg Street. There is an intermittent stream located along the north side of the rear gate access road (see **Figure 2-8**). The southern portion of the Airport property consists of mowed/maintained habitat located within the Runway Protection Zone (RPZ) at the Runway 3L End. Additional mixed pine-hardwood forest habitat was identified within the southwest portion of the airport property.

Figure 2-8: Habitats



Michael Baker International, 2018.



Fish Communities

There is only one water body, a tributary to North Fork Peachtree Creek, located on the airport property that supports fish communities. Approximately 1,100 feet of this perennial stream are located within the current boundary of the airport property. This segment of the stream is located just south of the CDC building and flows southeast underneath Buford Highway where it exits the airport property. Therefore, any future projects that would result in culverting or piping any segment of this resource would require fish passage consideration, which would likely require that the structure to be installed be buried approximately 20 percent in order to allow fish to easily pass through the structure.

2.7.3 Wildlife

Federally Protected Species

Section 7 of the Endangered Species Act of 1973 (ESA) requires federal agencies to ensure that any action authorized, funded, or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat.¹ In accordance with Section 7 of the ESA, county listings of federally and state-protected species were reviewed via the Information for Planning and Consultation (IPaC) maintained by the USFWS and the Georgia Rare Species and Natural Community database maintained by the GADNR-WRD to determine the potential for federally protected species being located on the airport property. According to the data provided by the USFWS and the GADNR-WRD, DeKalb County is located within the potential range of the following federally threatened vegetations:

- Pool sprite (*Amphianthus pusillus*),
- Michaux's sumac (*Rhus michauxii*),
- Black-spored quillwort (*Isoetes melanospora*).

Based on the results found from the Ecological field surveys, it has been determined that there is no suitable habitat for federally protected species located on the DeKalb-Peachtree Airport property. Therefore, future projects at the airport would not have the potential to result in adverse impacts to federally protected species.

Critical Habitat

The USFWS Critical Habitat Portal confirmed that there is no critical habitat for federally protected species located in DeKalb County, GA. Therefore, future projects at the airport would not have the potential to adversely affect critical habitat.

Migratory Birds

The Migratory Bird Treaty Act (MBTA) requires that federal agencies identify any areas potentially used by birds protected under the MBTA and characterize these areas along with their significance to migratory birds. The USFWS's IPaC database lists eleven 11 migratory birds of concern potentially occurring within DeKalb County shown in **Table 2-3**. There is no suitable habitat for the King Rail located on the airport property, as there is no marsh habitat present. There is no suitable habitat for the blue-winged warbler, cerulean warbler, eastern whip-poor-will, or red-headed woodpecker located within the project study

¹ USFWS (May 2010). Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service – ESA. Accessed on 10/1/2018: <https://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/endangered-species-act.html>.



area, as the forested habitats that these birds prefer typically include an open understory. The forested areas identified on the airport property consist of a dense understory of shrubs and woody vines.

The scrub/shrub habitats located on the airport property provides suitable habitat for the prairie warbler, while the forested habitats provide suitable habitat for the Kentucky warbler, prothonotary warbler, and wood thrush.

Table 2-3: Migratory Birds

Name	Scientific Name	PDK	DeKalb County
Bald-eagle	<i>Haliaeetus Leucocephalus</i>		•
Blue-winged Warbler	<i>Vermivora Pinus</i>		•
Cerulean Warbler	<i>Dendroica Cerulea</i>		•
Eastern Whip-poor-will	<i>Antrostomus Vociferus</i>		•
Kentucky Warbler	<i>Oporornis Formosus</i>	•	•
King Rail	<i>Rallus Elegans</i>		•
Prairie Warbler	<i>Dendroica Discolor</i>	•	•
Prothonotary Warbler	<i>Protonotaria Citrea</i>	•	•
Red-Headed Woodpecker	<i>Melanerpes Erythrocephalus</i>		•
Rusty Blackbird	<i>Euphagus Carolinus</i>		•
Wood Thrush	<i>Hylocichla Mestelina</i>	•	•

Source: U.S Fish and Wildlife Services

Due to the presence of suitable habitat for four of the migratory birds listed by the USFWS as species of concern, precautions may be implemented potential construction contracts to reduce the likelihood that inadvertent adverse impacts to migratory birds would occur. Although the take of migratory birds

resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take migratory birds, the USFWS recommends that steps be taken to help prevent an incidental take of migratory birds. A list of voluntary mitigation measures that could be implemented by the Airport to prevent an incidental take of migratory birds is provided, below:

1. Conduct activities outside of the bird nesting season to avoid the need for active nest relocation or destruction, when appropriate;
2. Perform nest surveys prior to conducting clearing activities during the breeding season;
3. If possible, contact a federally-permitted rehabilitator (https://www.nrawildlife.org/page/Find_A_Rehabilitator) to provide assistance in relocating an active nest.

2.7.4 Climate

Although there are no federal standards for aviation-related greenhouse gas (GHG) emissions, it is well established that GHG emissions can affect climate. The Council on Environmental Quality (CEQ) has indicated that climate should be considered in NEPA analyses, and in 2016 the CEQ released final guidance for federal agencies on how to consider the impacts of their actions on global climate change in their NEPA reviews. A Notice of Availability for that guidance was published on August 5, 2016 (81 Federal Register 51866). However, pursuant to Executive Order 13783, "Promoting Energy Independence and Economic Growth," of March 28, 2017, the guidance has been withdrawn for further consideration. For future projects at the airport, GHG emissions from construction-related activities aircraft operations should be considered.

2.7.5 Coastal Resources (g)

DeKalb County is not one of the counties located within the coastal zone of Georgia. Therefore, future projects at the airport would not result in direct, indirect, or cumulative impacts on coastal resources, under the Coastal Zone Management Act (CZMA), Coastal Barrier Resources Act (CRBA), or the Coastal Barrier Improvement Act (CBIA).

2.7.6 Section 4(f) Properties

"Section 4(f) of the U.S. Department of Transportation (DOT) Act of 1966 prohibits federal agencies from using land from publicly owned parks, recreation areas (including recreational trails), wildlife and waterfowl refuges, or public and private historic properties, unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a



Figure 2-9: Doc Manget Memorial Airport Park



use.”² There is one publicly owned park, Doc Manget Memorial Airport Park, located on the airport property. The park is located near the airport administrative buildings and below the ATCT. There are no recreation areas or trails located on or adjacent to the airport property. In addition, there are no wildlife or waterfowl refuges located near the airport property.

Section 4(f) prohibits the use of public and private historic properties unless there is no feasible and prudent alternative. Adverse impacts to historic properties can be visual or audible in nature, therefore, future projects implemented at the airport may adversely affect historic properties even though they are contained entirely on the property. As a result, surveys for historic properties that may be eligible for listing on the National Register of Historic Places (NRHP) must be conducted prior to implementation of future airport projects. These historic resources surveys will need to identify a project-specific Area of Potential Effects (APE), identify any structures within the APE that are 50 years old or older and eligible for listing on the NRHP, and then a determination needs to be made as to whether project implementation would result in adverse impacts to any resources identified.

2.7.7 Farmlands (g)

For the purposes of the Farmland Protection Policy Act (FPPA), farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to the FPPA can also be forest land, pastureland, cropland, or other land, but not water or urban built-up land. Farmland soils are considered a non-renewable resource, and conversion of farmland to an airport facility would be an irreversible commitment of resources as long as that facility remains in place. PDK is located within a U.S. Census Bureau urban area (GA03817); therefore, the FPPA does not apply.

2.7.8 Hazardous Materials, Solid Waste, And Pollution Prevention

Hazardous Materials

Hazardous materials are substances defined and regulated by the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act, and substances defined and regulated by the Toxic Substances Control Act. In general, hazardous materials are substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may present substantial danger to public health or welfare, or to the environment, when released or otherwise improperly managed.³ There are three Fixed Base Operators (FBOs) at the airport, all of which provide full-service fueling services (i.e. Avgas and Jet A fuel) to their customers. There is also one self-service fueling facility located on the airport property to the west of the airfield and north of airport Road. As a result, there are eight aboveground fuel farms containing Avgas and Jet A fuel located throughout the airport property. Additionally, many of the aviation-related businesses at the airport are classified as either handlers of hazardous materials or small quantity generators of hazardous materials. Therefore, future projects at the airport need to be evaluated for their potential to result in adverse impacts to hazardous materials facilities.

Solid Waste

² Federal Transit Administration (March 166, 2016). *Section 4(f) of the Department of Transportation Act*. Accessed on October 1, 2018 at: <https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/section-4f-department-transportation-act>.

³ Resource Conservation and Recovery Act (RCRA) Subtitle C, 40 CFR Part 251.



The DeKalb County Landfill is located approximately 24 miles south of the airport property, and the landfill accepts commercial waste such as concrete products. Therefore, future projects at the airport that would result in the generation of solid waste would be supported by the presence of the DeKalb County Landfill, which would be capable of accepting any construction waste produced by the project.

Pollution Prevention

The construction of additional paved surfaces at the airport would increase the impervious surfaces at the airport. Therefore, the airport would be required to update its current Stormwater Pollution Prevention Plan (SWPPP) to account for the additional impervious surfaces to be constructed on the airport property. In addition, any clearing and grubbing activities associated with future projects would result in the exposure of loose soils immediately following construction activities. Best Management Practices (BMPs) would need to be used to reduce the amount of sedimentation and erosion on the construction site. Silt fencing would need to be installed around the perimeter of the disturbed areas to prevent sediments from escaping the construction sites, and each site would be grassed with native grasses to stabilize the cleared areas.

2.7.9 Historic Resources

The National Historic Preservation Act of 1966 (NHPA) mandates that districts, sites, buildings, structures, and objects that are significant to American history, architecture, archaeology, engineering, and culture be cataloged on the NRHP. Section 106 of the NHPA, Protection of Historic and Cultural Resources, requires federal agencies to consider the effects of their actions on resources listed on the NRHP, as well as on resources that are determined to be eligible for listing on the NRHP.

Impacts to cultural resources can occur by physically altering, damaging, or destroying a resource or by altering characteristics of the surrounding environment that contribute to the resource's significance. Resources can also be impacted by neglecting the resource to the extent that it deteriorates or is destroyed. Adverse effects occur when these activities intersect with identified NRHP-eligible resources within the Area of Potential Effects (APE).

Based on the information provided on the GNARGIS website, there are currently no recorded historic resources located on Airport property.

2.7.10 Natural Resources and Energy Supply

In accordance with FAA guidelines, federal agencies must evaluate potential changes in energy requirements and the use of consumable natural resources at an airport for any proposed construction activities. Energy supply requirements typically fall into two categories: those that relate to changing demand from stationary facilities (e.g., major airfield lighting and terminal building heating demands) that might exceed local supplies or capacities; and those involving the increased movement of air and ground vehicles to the extent that demand exceeds energy supplies. An evaluation of potential impacts on natural resources includes considerations such as the local availability of construction materials and the use of scarce or unusual consumable natural resources for construction of the proposed project.

Future projects at the airport are not likely to result in a permanent increase in demand for energy supplies. Construction activities typically result in a temporary increase in demand for petroleum products in the form of fuel to operate the construction equipment. However, this temporary increase in demand



for petroleum products would not represent a significant increase in demand for energy resources. Any future project at the airport that would result in a change in aircraft fleet mix or the number of aircraft operations, an evaluation of the potential impacts to natural resources and energy supply would be necessary.

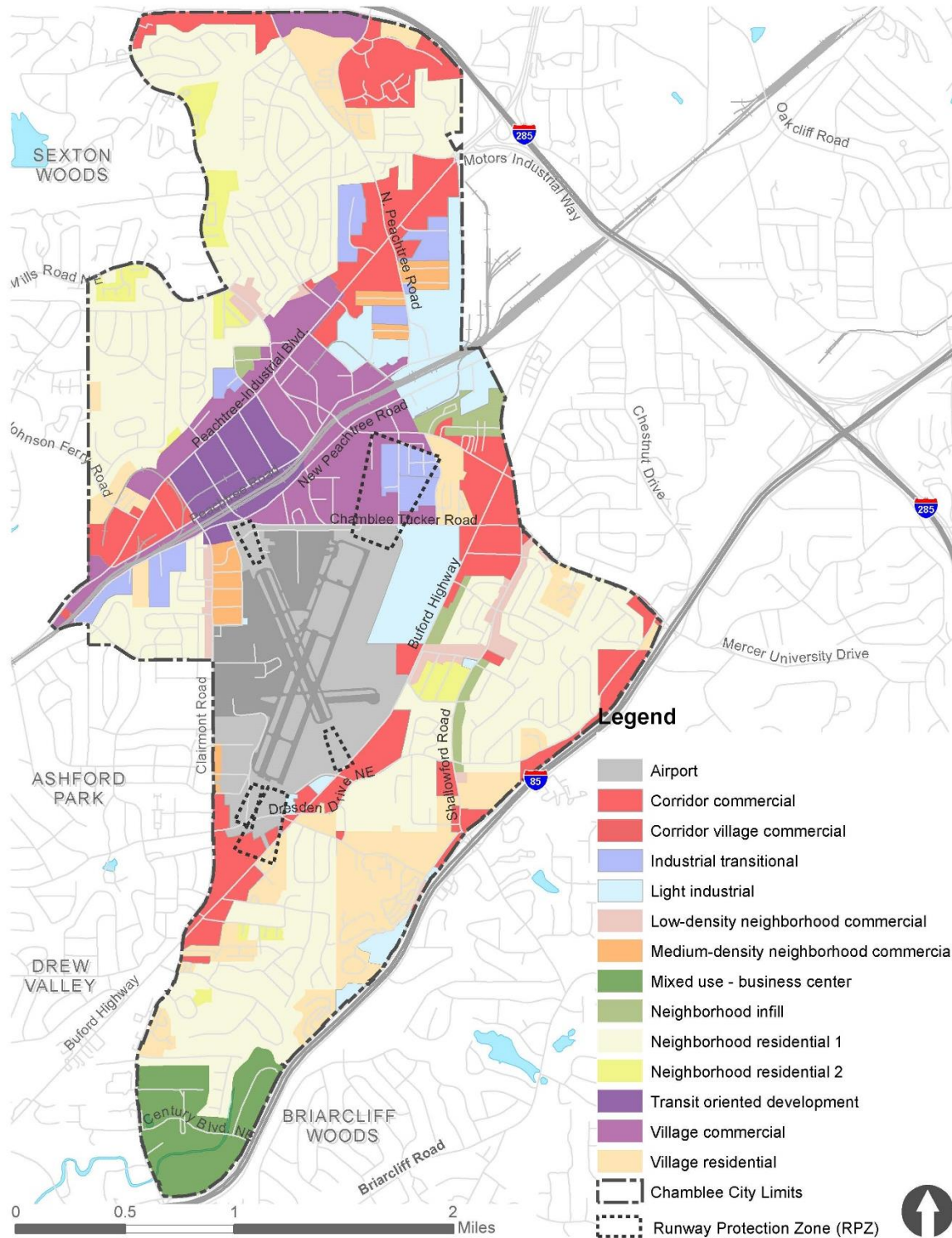
2.7.11 Noise and Compatible Land Use

Airport land use compatibility planning means controlling land uses in and around airports to promote use and development that does not create restrictions to the airport, or hazards to persons or property on the ground and the flying public. Land uses should be controlled within the airport, runway protection zones, approach areas and the general vicinity of the airport.

The City of Chamblee Comprehensive Plan (adopted 3/17/15; amended 9/20/16) was reviewed to determine the existing zoning and future land use plans on and adjacent to PDK Airport. Land use immediately surrounding the airport is regulated by the City of Chamblee, City of Brookhaven, City of Doraville and unincorporated DeKalb County. Properties adjacent to the airport are zoned Corridor Commercial, Village Commercial, Neighborhood Commercial, Light Industrial, Neighborhood Residential 1, and Transit-Oriented Development. Land uses within the Runway Protection Zones (RPZ), to the north are used for Industrial Transitional and Village Commercial while the land use within the southern RPZ is largely used for Commercial Corridor and Medium-Density Neighborhood Commercial.

Land use within the existing airport property is classified as "Airport/Transportation" use shown in Error! Reference source not found. As a result, all future projects within the airport boundary must be compatible with an airport/transportation facility.

Figure 2-10: City of Chamblee Land Use Plan



Source: City of Chamblee, 2018.



The compatibility of existing and planned land uses is often associated with the extent of the airport's noise impacts. Noise is considered unwanted sound that can disturb routine activities (e.g., sleep, conversation, student learning) and can cause annoyance. Aviation noise primarily results from the operation of fixed and rotary wing aircraft, such as departures, arrivals, overflights, taxiing, and engine run-ups.⁴ FAA policy is that airports are to be constructed and operated such that they minimize current and future noise impacts on surrounding communities [49 U.S.C. §47101(a)(2)]. Accordingly, the FAA pursues a program of aircraft noise control, in cooperation with the aviation community. The FAA has established several programs and activities aimed at addressing these constraints, which includes limiting the number of people exposed to significant noise levels.

The FAA's significance threshold for noise is an action that would increase noise by a Day Night Average Sound Level (DNL) by 1.5 dB or more for a noise sensitive area that is newly exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65dB level due to a DNL 1.5dB or greater increase, when compared to the no action alternative for the same timeframe.⁵ Noise control measures include noise reduction at the source; i.e., development and adoption of quieter aircraft, soundproofing and buyouts of buildings near airports, operational flight control measures, and land use planning strategies.

In order to prevent or reduce adverse noise impacts to the adjacent noise receptors (i.e. single-family, multi-family, and high-density multi-family communities) future airport development actions that result in fleet mix changes, number of aircraft operations, air traffic changes or new approaches to the airport should be evaluated for their potential to produce increases of more than 1.5 dB or more inside the 65 DNL in comparison the existing condition existing condition. **Figure 2-11** illustrates the most recent airport DNL noise contours prepared by the Airport in 2017 which reflects 2016 operations overlaid onto a land use base map.

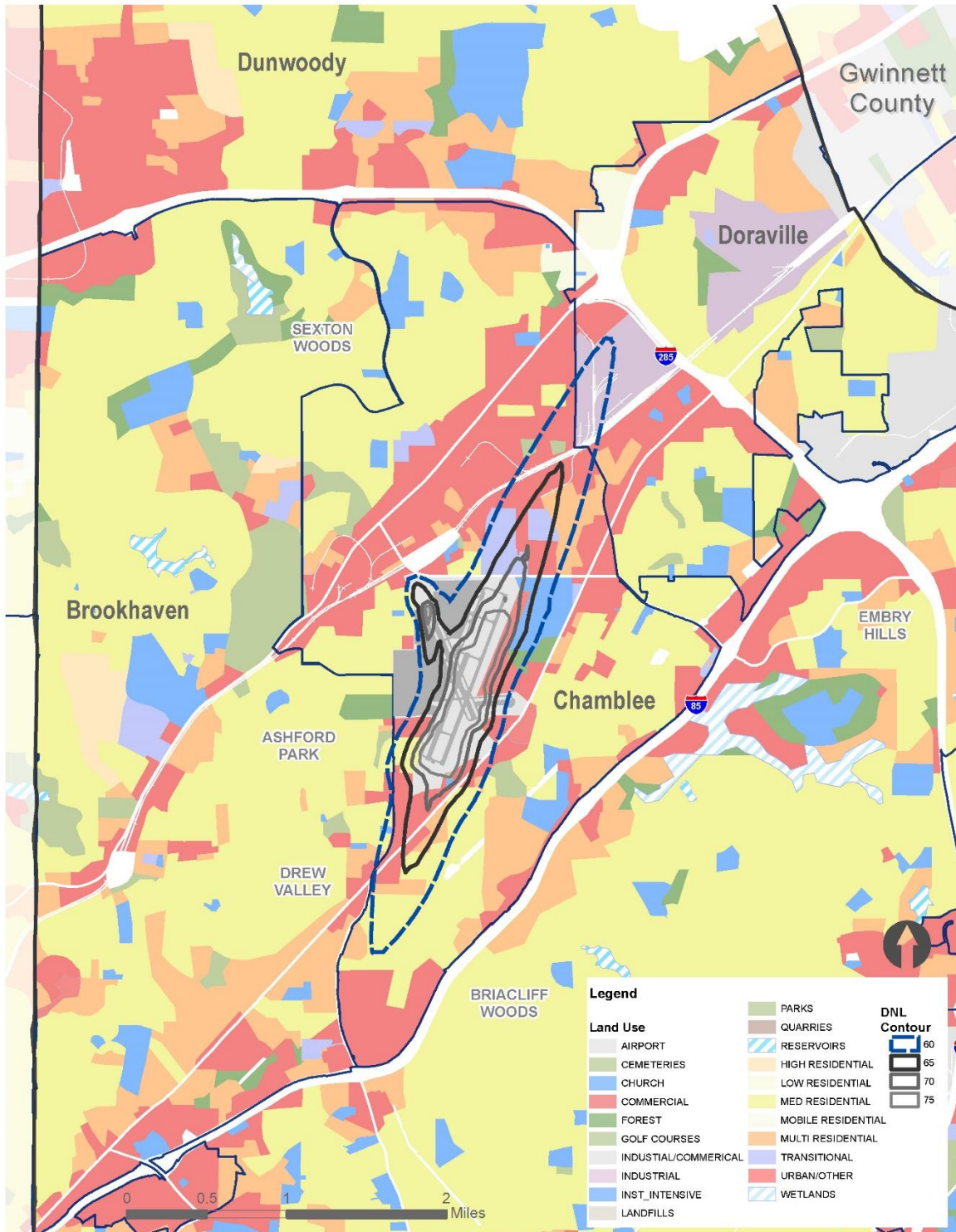
In addition to aviation noise impacts, construction noise impacts could occur when the equipment being used during construction-related activities on the airport property produces enough unwanted sound that adjacent property owners are adversely affected. Construction noise impacts should be considered for any major improvements proposed in the master plan.

⁴ FAA. 2015. *FAA Order 1050.1F Desk Reference*. July 2015.

⁵ *Ibid.*

⁶ FAA, *Environmental Desk Reference*

Figure 2-11: 2016 Noise Contours and Existing Land Use



Source: Michael Baker International, 2019.



2.7.12 Socioeconomic Impacts and Environmental Justice

In accordance with 40 CFR 1508.14, NEPA documentation must address social impacts of a proposed project. An evaluation of the “human” environment considers the relationship of people with their natural and physical environments because people are typically affected by changes in these two types of environments.⁶ In accordance with E.O. 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, federal agencies to identify community issues of concern during the study process, particularly those issues relating to decisions having an impact on low-income or minority populations.

Each of the future planned projects must be evaluated for its potential to result in adverse impacts to the socioeconomic, environmental justice, and children’s environmental health.

2.7.13 Visual Effects

FAA Order 1050.1F defines visual effects as “the extent to which the proposed action or alternative(s) would either: 1) produce light emissions that create an annoyance or interfere with activities; or 2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment.” Furthermore, visual effects are usually difficult to define and assess because they involve subjectivity. Although aviation-related and aerospace actions do not typically result in adverse visual effects, they can occur in specific circumstances. Adverse visual impacts are divided into two categories: (1) light emission effects; and (2) visual resources and visual character.

Light emissions include any light that emanates from a source into the surrounding environment. Navigational aids, terminal lighting, parking facility lighting, airfield and apron lighting are all examples of airport sources of light emissions. Visual resources include traditional cultural properties, buildings, and other natural or manmade landscape features that are visually important or have unique characteristics. Structures or objects that obscure or block other landscape features would be considered visual resources. Visual resources also can include collections of various individual resources that can be viewed at once or in concert from the area surrounding the site of the proposed action or alternative(s). In some instances, the nighttime sky may be considered a visual resource. Visual character refers to the overall makeup or the existing environment where the proposed action or alternative(s) would be located. Developed areas in proximity to densely populated areas have an urban visual character, whereas less developed areas may have a visual character that is better defined by the landscape features as opposed to manmade structures.

There are no special purpose laws or requirements that address visual effects. However, some visual resources are protected under federal, state, or local regulations. In addition to NEPA, some other laws that protect resources that may be adversely affected by visual effects include Section 106 of the National Historic Preservation Act, Section 4(f) of the DOT Act, the Wild and Scenic Rivers Act, and state and regional coastal protection acts. Visual resources may also be protected and managed on federal resource lands, such as U.S Forest Service Resource Management Plans and the Bureau of Land Management Visual Resource Management System. There are also state and local regulations, policies, and zoning ordinances that may apply to visual effects. The airport property consists of various sources of lighting that is mostly contained within the existing boundaries. Types of lighting includes taxiway and runway lighting, Runway

End Indicator Lights, a rotating beacon, apron lighting, roadway street lamps, and exterior building lights.

There are no known visually sensitive resources located in the vicinity of the airport that are not already affected by the presence of the existing facility; therefore, it is unlikely that future projects at the airport would result in adverse light emission impacts to adjacent property owners. However, visual impacts could occur if an NRHP-eligible historic property is identified in the vicinity of the airport and a future project might result in the clearing of forested habitats that create a new sightline to the airport property.

2.7.14 Waters of the U.S.

Wetlands and Surface Waters

Jurisdictional waters of the U.S. identified on the airport property three intermittent streams, two wetlands, and one perennial stream. One intermittent stream is located on the undeveloped parcel located north of Chamblee-Tucker Road. This resource extends from approximately 470 feet west of Cataline Drive to a point approximately 841 feet east of Catalina Drive.

The second intermittent stream is located just north of the rear property access road east of Runway 3R-21L and connects two jurisdictional wetlands. Approximately 385 feet of this intermittent stream are located on the airport property. The first jurisdictional wetland serves as the headwaters for the second intermittent stream and is located northwest of the pipe installed underneath the driveway leading into the abandoned parking lot northwest of the American Fueling Systems business. The second jurisdictional wetland is the at limit of the second intermittent stream and the third intermittent stream. The third intermittent stream flows from southwest to northeast through the forested habitat located south of the Runway 34 End. Approximately 850 feet of this resource are located on the airport property.

Floodplains

Executive Order (E.O.) 11988, Floodplain Management, requires that efforts be made to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains. It also requires that efforts be made to avoid direct or indirect support of development in floodplains wherever there is a practicable alternative, and it prohibits floodplain encroachments that would cause a substantial flood risk, a critical interruption of an emergency transportation facility, or an adverse impact on the floodplain's natural values.

Development in a FEMA-designated 100-year floodplain is permitted by federal regulations if hydrologic and hydraulic analyses demonstrate that the development would not result in an increase of more than one foot of the Base Flood Elevation (BFE). However, floodways must retain the ability to convey the 100-year flood by remaining unobstructed.

Based on a review of the FEMA floodplain maps, there are Zone A, Zone AE, and Zone Z floodplains located on the undeveloped parcel north of Chamblee-Tucker Road. These floodplains are associated with the intermittent stream and North Fork Peachtree Creek that flow through this parcel. There is also an area of Zone AE floodplains located along the east Airport boundary associated with the 1,100-foot segment of North Fork Peachtree Creek south of the CDC building. Future projects at the airport that would result in the filling of floodplains would require a hydrologic and hydraulic analysis to determine if the impacts would result in a greater than 1-foot rise in the base flood elevation. If so, a Conditional Letter of Map Revisions would be requested from the Federal Emergency Management Agency (FEMA). If not, a No-Riser certification would be issued by FEMA.



Groundwater

The Safe Drinking Water Act (42 U.S.C. 300 (f)-300j-26) prohibits federal agencies from funding actions that would contaminate a U.S. EPA-designated sole source aquifer or its recharge area. There are no aquifers or recharge areas on or adjacent to the airport property; therefore, any future project at the airport would not result in adverse impacts to groundwater sources or recharge areas.

Wild and Scenic Rivers

The National Wild and Scenic Rivers Act of 1968 (16 U.S.C. Parts 1271-1287) protects rivers that are listed as significant resources for their wild, scenic, or recreational values, along with those that are under consideration for inclusion on the list. In addition, under a 1979 Presidential Directive, federal agencies are required "... to take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory." There are no federally protected wild, scenic, or recreational rivers, nor are there any rivers listed on the Nationwide River Inventory in the vicinity of the airport. The only river listed on the National Wild and Scenic River System within Georgia is the Chattooga River. The southern limit of the protected portion of the Chattooga River is located approximately 80 miles northeast of the airport property; therefore, future projects at the airport would not result in adverse impacts to Wild and Scenic Rivers.

DRAFT



Chapter 3 – Aviation Activity Forecasts

3.1 Introduction

The master plan update for PDK includes an aviation forecasting effort. Forecasts were developed using the most recently available information and are referenced in later sections of this study to determine short- and long-term facility requirements and to provide the preliminary justifications for recommended improvements. The forecasts are presented over a 22-year planning period and have a base year of 2018 and extend through 2040. A 22-year planning period was selected so that 20 years of capital and financial planning could be conducted following the completion of this Master Plan Update. The activity at PDK remained relatively consistent between 2016 and 2018, although the construction of the Engineered Materials Arresting System (EMAS) bed on the south end of Runway 3R-21L partially impacted the activity at PDK for a few months in 2018. As the second busiest airport in the State of Georgia in terms of operations behind the Hartsfield-Jackson Atlanta International Airport (ATL), PDK serves as the premier airport for general aviation and corporate activity in the Atlanta area and was the 11th busiest airport in the country for business jet operations for the one-year period between November 1, 2017 and October 31, 2018 (refer to **Table 3-1**). PDK is classified as a General Aviation Reliever Airport for ATL in the Federal Aviation Administration's (FAA's) National Plan of Integrated Airport Systems (NPIAS). The airport has more based aircraft than any other airport in Georgia and is home to several flight schools and corporate flight departments of Atlanta-based companies. The number of businesses, facilities, and amenities and services has continued to grow at PDK over the years and is expected to continue to grow as the Atlanta area continues to grow as a worldwide gateway for aviation activity. Today, there are over 25 businesses located at PDK, two restaurants, and an aviation park (Doc Manget Memorial Aviation Park).

With professional NFL football (Atlanta Falcons), MLB baseball (Atlanta Braves), NBA basketball (Atlanta Hawks), and MSL soccer (Atlanta United FC), as well as several popular NCAA athletic teams located nearby, PDK frequently attracts a high volume of corporate traffic for professional and college sporting events. Between November 1, 2017 and October 31, 2018, the busiest day for corporate jet activity at PDK was January 9, 2018 with 225 corporate jet operations, which was the day immediately after the 2018 NCAA College Football Playoff National Championship game that was held at the Mercedes-Benz Stadium in Atlanta between the Alabama Crimson Tide and the Georgia Bulldogs. On January 30, 2000, Super Bowl XXXIV (34) was held at the Georgia Dome in Atlanta between the St. Louis Rams and the Tennessee Titans. On the following day (January 31, 2000), there were 298 corporate jet operations at PDK, which was the second busiest day for corporate jet operations at PDK since 2000. On October 20, 2010, PDK experienced 311 corporate jet operations, which was the busiest day since at least 2000 and coincided with the National Business Aviation Association's (NBAA's) Annual Meeting and Convention that was held at the Georgia World Congress Center. Other planned sporting events at the Mercedes-Benz Stadium include Super Bowl LIII (53) in February 2019, the 2020 NCAA Men's College Basketball Final Four in April 2020 and is one of many possible U.S. stadiums for the 2026 FIFA World Cup. These events draw massive crowds and are mentioned because of how they represent events when PDK experiences the greatest level of peaking and the greatest demands are placed on the airport to accommodate visiting passengers



and their aircraft. Although events like those do not occur on a regular basis throughout the year, they should be recognized because of how they affect the operation of PDK and the demands of those who want to utilize PDK during those events.

Table 3-1: Business Jet Operations (11/1/2017 to 10/31/2018)

Rank	Code	City	State	NPIAS Category	Business Jet Operations
1	TEB	Teterboro	NJ	Reliever	142,371
2	DAL	Dallas	TX	Primary	61,565
3	VNY	Van Nuys	CA	Reliever	58,346
4	HPN	White Plains	NY	Primary	58,244
5	IAD	Washington	VA	Primary	55,410
6	LAS	Las Vegas	NV	Primary	52,740
7	HOU	Houston	TX	Primary	50,059
8	PBI	West Palm Beach	FL	Primary	49,456
9	MDW	Chicago	IL	Primary	47,687
10	APA	Denver	CO	Reliever	42,106
11	PDK	Atlanta	GA	Reliever	39,481
12	SDL	Scottsdale	AZ	Reliever	35,633
13	OPF	Miami	FL	Reliever	35,042
14	SNA	Santa Ana	CA	Primary	33,944
15	BED	Bedford	MA	Reliever	32,581
16	APF	Naples	FL	General Aviation	30,721
17	SJC	San Jose	CA	Primary	30,204
18	BFI	Seattle	WA	Primary	29,414
19	BNA	Nashville	TN	Primary	29,315
20	SAT	San Antonio	TX	Primary	29,089

Sources: FAA Traffic Flow Management System Counts (TFMSC) database and Michael Baker International, Inc., 2019.



As explored throughout this master plan, there is a desire to identify sites on the airport property where aeronautical demand can be accommodated in a flexible manner. The closure of Runway 9-27 created new land development opportunities on both sides of the parallel runways where hangars, aprons, and other facilities have and can continue to be constructed to accommodate additional based aircraft and businesses. DeKalb County (owner of PDK) is currently exploring opportunities to develop several hangars in the southwest quadrant of PDK. The airport recently conducted a survey to determine what the demand is for new based aircraft tenants, the results of which indicated that there is an immediate demand for several aircraft to relocate to PDK which would conduct several thousand additional operations on an annual basis. Airport management also maintains a based aircraft waiting list where individuals or organizations must pay a fee to be included. Therefore, the growth potential at PDK is highly dictated by the availability of hangar space to accommodate new based aircraft ranging from small pistons and helicopters to long-range corporate jets, as well additional apron space to better accommodate visiting aircraft during peak times. PDK is also an origin/destination for international general aviation traffic in the Atlanta area with prior notification to the U.S. Customs and Border Protection (CBP) which serves the airport on an on-call basis.

In Boeing's Pilot & Technician Outlook 2018-2037, the company projects that a total of 790,000 new pilots and 754,000 new maintenance technicians will be needed to support the global demands of civilian commercial, business, and helicopter demands by 2037. As an increasing number of pilots reach their mandatory retirement age in the U.S. and in other countries (e.g., currently age 65 in the U.S. for commercial pilots), many organizations like the Air Line Pilots Association (ALPA) are concerned about the potential for pilot shortages and are advocating for a renewed interest in pilot training programs. It is anticipated that much of that training and maintenance activity will continue to occur at PDK to support the global demands.

There are numerous factors to consider as part of the forecasting effort for PDK and several different opportunities for growth amongst the aviation sectors that exist at the airport. These types of historical and anticipated trends are explored throughout this chapter to determine how they may influence the forecasts of aviation demands for PDK. The following forecasting elements are presented herein:

- Forecasting Limitations
- Historical and Baseline Activity Analysis
- Factors and Opportunities Affecting Activity Levels
- Based Aircraft Forecasts
- Operations Forecasts
- Instrument Operations Forecast
- Peak Activity Forecasts
- Forecast Summary



3.2 Forecasting Limitations

Forecasting aviation activity is a complex process that considers a multitude of factors, both controllable and beyond an airport's control. Forecasts are not to be construed with predictions of the future, but rather an educated guess of future activity based on a variety of predictors, calculations, assumptions, and subjective judgment. The accuracy of the estimates decline as the planning term is extended, potentially because of unforeseen local or geopolitical events, natural disasters, and/or climatological events.

The FAA's forecast approval process typically constitutes an approval for planning purposes only, which allows the airport sponsor to depict projects that are consistent with the long-term growth expectations on the Airport Layout Plan (ALP) Drawing Set. In most cases, prior to issuing a grant, the FAA will require updated information demonstrating that a proposed project is justified by activity at the time, or by activity that would directly result from the implementation of the proposed project. This policy helps to ensure that funding is directed towards critical projects throughout the U.S.

3.3 Historical and Baseline Activity Analysis

Many elements compose the broad definition of General Aviation (GA) activity. In simplest terms, GA includes all segments of the aviation industry except those conducted by scheduled air carriers and the U.S. military. GA activities may include pilot training, sightseeing, aerial photography, law enforcement, and medical flights, as well as business, corporate, and personal travel. GA operations are divided into the categories of local or itinerant. Local operations are arrivals or departures performed by aircraft that remain within the airport traffic pattern, or those that occur within sight of the airport. Local operations are most often associated with training activity and flight instruction (e.g., touch-and-goes). Itinerant operations are arrivals or departures that do not remain within the airport traffic pattern and/or that originate from another airport. The FAA defines an operation as either a single aircraft landing or takeoff. Under this definition, touch-and-goes are considered two operations (one takeoff plus one landing) and are deemed local operations. Itinerant operations are typically comprised of private, business/corporate, and air taxi flight activity, but may also include law enforcement and medical flights. A summary of the historical and baseline operations and based aircraft values is presented below.



3.3.1 Historical and Baseline Operations

Table 3-2 and **Figure 3-1** summarize the historical Airport Traffic Control Tower (ATCT) records for PDK between 1990 and 2018 as obtained from the FAA's Operations Network (OPSNET) database. The information in the OPSNET database is generated from ATCT-reported activity counts and thus closely resembles the records maintained by the ATCT staff at PDK. The values shown in 2018 reflect the one-year period from November 1, 2017 to October 31, 2018 and reflect the baseline conditions for this forecasting effort (i.e., the starting values from which the forecasts are projected from). In 1988, the ATCT was constructed and Runway 3R-21L was extended to its current length of 6,001 feet. Of the years shown in **Table 3-2**, 1990 was the busiest for total operations at PDK with 253,398. The decline in itinerant and local activity since that time is not uncommon of many GA airports throughout the U.S. and was caused by multiple factors including federal legislation, noise and airspace concerns, reduced GA flying due to increasing costs of fuel, maintenance (e.g., for aging aircraft), new aircraft, liability, and aircraft storage fees, at least one economic recession (i.e., the Great Recession), business closures, and hurricanes and other natural disasters. Much of the reduction in local GA activity since 2000 is often attributed to events such as the terrorist attacks on September 11, 2001, sharp fuel price increases after Hurricane Katrina damaged Gulf Coast Refineries in August 2005, and the economic recession of the late 2000s. Although some of those factors were impossible to predict, their resulting consequences had considerable impacts on aviation activity throughout the U.S. The recession resulted in a decline in itinerant GA activity at PDK as many corporations grounded their aircraft fleet and individuals had less disposable income for private air transportation. The total activity levels at PDK have continued to trend upward in recent years as the cost of aviation fuel has gone down, the economy has continued to improve and there are rising levels of disposable income, and the Atlanta area continues to grow (particularly in the aviation sector).

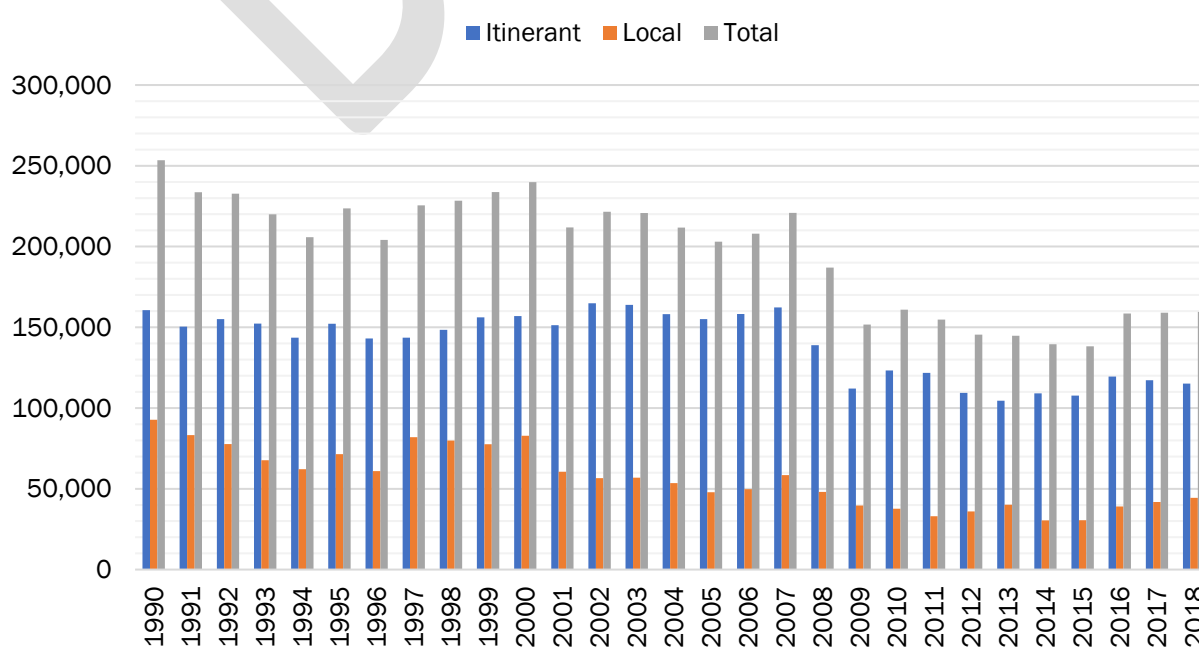
Historical flight plan activity data from the FAA's Traffic Flow Management System Counts (TFMSC) database is presented in **Table 3-3**. Flight plans are filed by aircraft that intend to fly within Instrument Flight Rules (IFR) controlled airspace, which includes most jets and turboprops. The 2018 numbers represent the baseline IFR operations numbers for PDK; however, the temporary closures of Runway 3R-21L in 2018 for the construction of the EMAS bed resulted in a reduction of what the actual IFR operations would have been if the runway was not closed. During times when the runway was closed or when the available takeoff/landing length was reduced, many corporate aircraft flew into other GA airports in the Atlanta area. Now that the EMAS bed construction is complete, it is anticipated that there will be increased utilization of Runway 3R-21L by corporate aircraft conducting IFR operations moving forward. For example, Ultimate Air Shuttle currently provides one flight per weekday between PDK and Cincinnati Municipal Airport-Lunken Field (LUK) and is adding two flights per day Monday through Thursday between PDK and Charlotte/Douglas International Airport (CLT) and one flight on Fridays beginning March 18, 2019. Various Average Annual Growth Rates (AAGRs) are shown in the table to highlight specific growth trends over time. Since 2012, IFR jet activity has shown the strongest growth trend at PDK and the recent growth rates are slightly higher than those projected for the nation in the FAA Aerospace Forecast Fiscal Years 2018-2038 (FAA Aerospace Forecast) for 'Active General Aviation and Air Taxi Hours Flown' by 2038 (i.e., the FAA Aerospace Forecast projects an AAGR of 2.70 percent for GA turbojet hours flown between 2018 and 2038). **Figure 3-2** illustrates a five-year summary of the historical IFR flight plan activity data for PDK.

Table 3-2: Historical and Baseline Operations (1990-2018)

Year	Itinerant						Local				Total
	Air Carrier	Air Taxi	GA	MIL	Total	% of Total	Civil	MIL	Total	% of Total	
1990	0	748	159,401	485	160,634	63.39%	92,731	33	92,764	36.61%	253,398
1991	0	1,020	148,895	448	150,363	64.36%	83,172	108	83,280	35.64%	233,643
1992	0	1,631	151,993	1,421	155,045	66.62%	77,662	25	77,687	33.38%	232,732
1993	0	1,196	150,626	499	152,321	69.24%	67,629	43	67,672	30.76%	219,993
1994	0	2,799	140,322	433	143,554	69.77%	62,132	53	62,185	30.23%	205,739
1995	0	3,723	148,021	445	152,189	68.05%	71,448	4	71,452	31.95%	223,641
1996	10	3,522	139,185	386	143,103	70.12%	60,916	77	60,993	29.88%	204,096
1997	7	3,871	138,870	853	143,601	63.68%	76,881	5,029	81,910	36.32%	225,511
1998	0	3,928	144,085	462	148,475	65.01%	79,864	34	79,898	34.99%	228,373
1999	9	5,167	150,567	383	156,126	66.79%	77,603	16	77,619	33.21%	233,745
2000	0	8,254	148,292	389	156,935	65.44%	82,875	15	82,890	34.56%	239,825
2001	0	10,997	139,919	393	151,309	71.43%	60,523	2	60,525	28.57%	211,834
2002	0	15,756	148,662	462	164,880	74.44%	56,576	38	56,614	25.56%	221,494
2003	24	17,631	145,740	474	163,869	74.24%	56,847	13	56,860	25.76%	220,729
2004	28	16,508	141,295	344	158,175	74.71%	53,547	3	53,550	25.29%	211,725
2005	20	18,521	136,172	351	155,064	76.40%	47,891	7	47,898	23.60%	202,962
2006	18	19,673	138,219	278	158,188	76.06%	49,794	0	49,794	23.94%	207,982
2007	19	21,121	106,634	225	162,313	73.50%	58,519	6	58,525	26.50%	220,838
2008	1	17,310	56,445	163	138,955	74.31%	47,830	207	48,037	25.69%	186,992
2009	1	12,460	99,271	314	112,046	73.85%	39,658	10	39,668	26.15%	151,714
2010	13	13,519	109,290	446	123,268	76.59%	37,640	41	37,681	23.41%	160,949
2011	22	13,688	107,526	507	121,743	78.65%	32,978	63	33,041	21.35%	154,784
2012	36	14,136	94,726	522	109,420	75.23%	35,967	57	36,024	24.77%	145,444
2013	38	14,976	89,090	458	104,562	72.23%	40,120	72	40,192	27.77%	144,754
2014	34	16,018	92,559	537	109,148	78.21%	30,186	220	30,406	21.79%	139,554
2015	33	17,900	88,957	797	107,687	77.89%	30,427	140	30,567	22.11%	138,254
2016	35	20,566	98,109	786	119,496	75.38%	38,913	116	39,029	24.62%	158,525
2017	54	21,748	94,775	626	117,203	73.68%	41,816	47	41,863	26.32%	159,066
2018	49	20,058	94,563	429	115,099	72.17%	44,337	57	44,394	27.83%	159,493
Average Annual Growth Rate (AAGR)											
1990-2000	N/A	27.14%	-0.72%	-2.18%	-0.23%	0.32%	-1.12%	-7.58%	-1.12%	-0.57%	-0.55%
2000-2010	N/A	5.06%	-3.01%	1.38%	-2.39%	1.59%	-7.59%	10.58%	-7.58%	-3.82%	-3.91%
2010-2018	18.04%	5.06%	-1.79%	-0.48%	-0.85%	-0.74%	2.07%	4.20%	2.07%	2.19%	-0.11%

Sources: FAA OPSNET database and Michael Baker International, Inc., 2019.
Note: The 2018 numbers represent the activity from 11/1/2017 to 10/31/2018.

Figure 3-1: Historical and Baseline Operations (1990-2018)



Sources: FAA OPSNET database and Michael Baker International, Inc., 2019.
Note: The 2018 numbers represent the activity from 11/1/2017 to 10/31/2018.



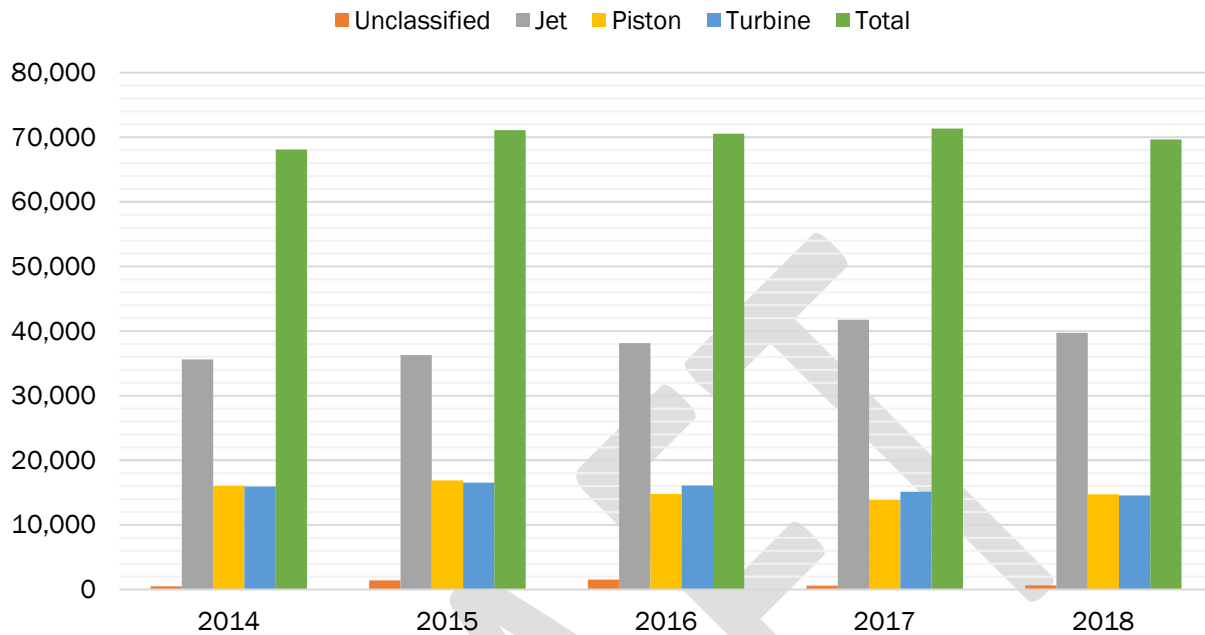
Table 3-3: Historical Flight Plan Activity by Aircraft Type (2000-2018)

Year	Unclassified	Jet	Piston	Turbine	Total Instrument	Total Operations	% of Total
2000	1,844	42,463	25,865	16,237	86,409	239,825	36.03%
2001	2,782	41,034	26,208	15,723	85,747	211,834	40.48%
2002	3,968	44,582	28,746	15,811	93,107	221,494	42.04%
2003	3,274	45,173	28,621	14,905	91,973	220,729	41.67%
2004	1,851	46,203	28,664	14,184	90,902	211,725	42.93%
2005	1,016	49,026	30,817	13,996	94,855	202,962	46.74%
2006	543	48,922	30,703	14,123	94,291	207,982	45.34%
2007	439	49,254	29,829	14,343	93,865	220,838	42.50%
2008	655	41,780	24,747	15,428	82,610	186,992	44.18%
2009	564	30,891	22,088	13,773	67,316	151,714	44.37%
2010	462	35,054	19,873	15,199	70,588	160,949	43.86%
2011	464	34,973	17,335	14,906	67,678	154,784	43.72%
2012	553	33,832	17,706	14,643	66,734	145,444	45.88%
2013	523	33,577	16,847	15,484	66,431	144,754	45.89%
2014	496	35,620	16,050	15,949	68,115	139,554	48.81%
2015	1,411	36,279	16,880	16,542	71,112	138,254	51.44%
2016	1,528	38,139	14,787	16,101	70,555	158,525	44.51%
2017	603	41,766	13,861	15,130	71,360	159,066	44.86%
2018	639	39,729	14,733	14,564	69,665	159,493	43.68%
Average Annual Growth Rate (AAGR)							
2000-2010	-12.93%	-1.90%	-2.60%	-0.66%	-2.00%	-3.91%	1.99%
2010-2018	4.14%	1.58%	-3.67%	-0.53%	-0.16%	-0.11%	-0.05%
2012-2018	2.44%	2.71%	-3.02%	-0.09%	0.72%	1.55%	-0.82%
2014-2018	6.54%	2.77%	-2.12%	-2.25%	0.56%	3.40%	-2.74%

Sources: FAA TFMSC database and Michael Baker International, Inc., 2019.
 Note: The 2018 numbers represent the activity from 11/1/2017 to 10/31/2018.



Figure 3-2: Historical Flight Plan Activity Data by Aircraft Type (2014-2018)



Sources: FAA TFMSC database and Michael Baker International, Inc., 2019.
 Note: The 2018 numbers represent the activity from 11/1/2017 to 10/31/2018.

3.3.2 Historical and Baseline Based Aircraft

Table 3-4 summarizes the historical and baseline based aircraft counts for PDK. The counts for the years prior to 2018 were obtained from the FAA’s 2017 Terminal Area Forecast (TAF) and the 2018 numbers were provided from an updated count of the based aircraft by airport personnel and was verified by the FAA through the National Based Aircraft Inventory Program. The single-engine and multi-engine aircraft shown in the table consist of both piston engine and turboprop engine aircraft. The significant decline in multi-engine aircraft over the years at PDK is consistent with what has been occurring nationwide with multi-engine piston aircraft as very few of those aircraft continue to be produced. Single-engine piston aircraft continue to comprise most of the based aircraft fleet at PDK and that trend is expected to continue for reasons including the based aircraft waiting list where individuals or organizations must pay a fee to be included and because of the high degree of flight training activity that occurs at the airport. As new areas on the airport property continue to be planned and prepped for hangar development, it is anticipated that the number of based single-engine pistons, jets, and helicopters will grow during the planning period of this Master Plan Update. **Figure 3-3** illustrates the based aircraft counts between 1990 and 2018. The Great Recession that began at the end of 2007 had the biggest single impact on based aircraft levels at PDK, which was a common trend at airports throughout the country.



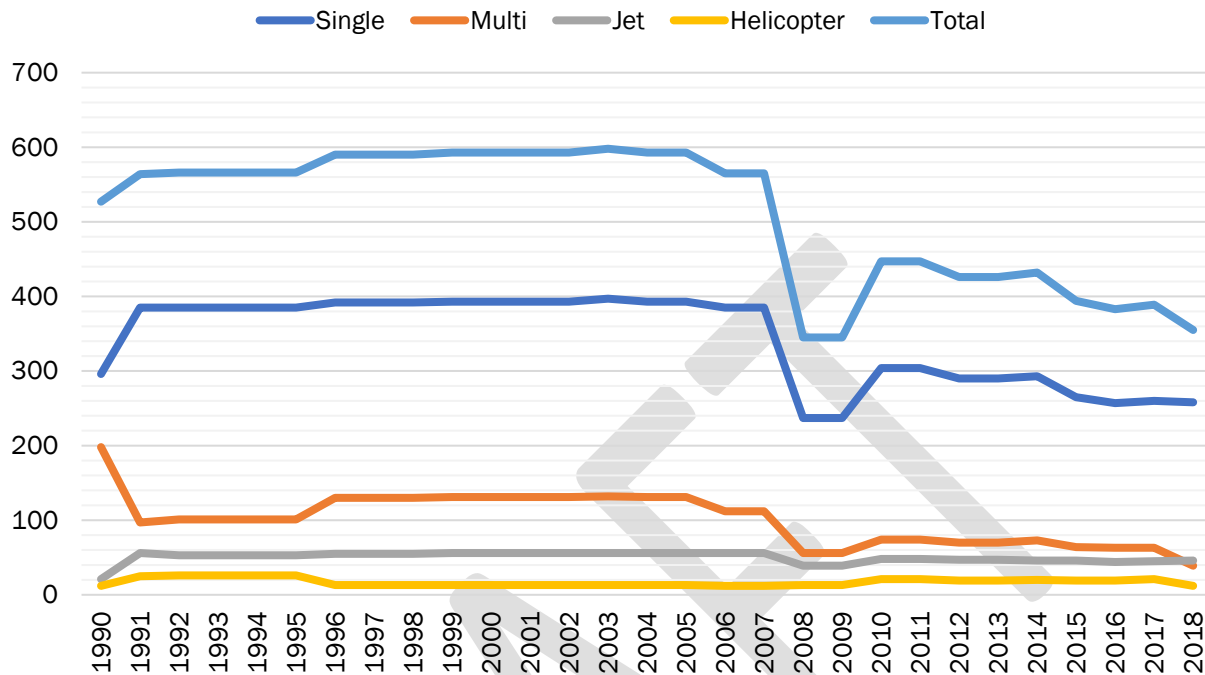
Table 3-4: Historical and Baseline Based Aircraft (1990-2018)

Year	Single-Engine		Multi-Engine		Jet		Helicopter		Other		Total Based Aircraft	Total Operations	OPBA
	Based	% of Total	Based	% of Total	Based	% of Total	Based	% of Total	Based	% of Total			
1990	296	56.17%	198	37.57%	21	3.98%	12	2.28%	0	0.00%	527	253,398	480.83
1991	385	68.26%	97	17.20%	56	9.93%	25	4.43%	1	0.18%	564	233,643	414.26
1992	385	68.02%	101	17.84%	53	9.36%	26	4.59%	1	0.18%	566	232,732	411.19
1993	385	68.02%	101	17.84%	53	9.36%	26	4.59%	1	0.18%	566	219,993	388.68
1994	385	68.02%	101	17.84%	53	9.36%	26	4.59%	1	0.18%	566	205,739	363.50
1995	385	68.02%	101	17.84%	53	9.36%	26	4.59%	1	0.18%	566	223,641	395.13
1996	392	66.44%	130	22.03%	55	9.32%	13	2.20%	0	0.00%	590	204,096	345.93
1997	392	66.44%	130	22.03%	55	9.32%	13	2.20%	0	0.00%	590	225,511	382.22
1998	392	66.44%	130	22.03%	55	9.32%	13	2.20%	0	0.00%	590	228,373	387.07
1999	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	233,745	394.17
2000	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	239,825	404.43
2001	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	211,834	357.22
2002	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	221,494	373.51
2003	397	66.39%	132	22.07%	56	9.36%	13	2.17%	0	0.00%	598	220,729	369.11
2004	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	211,725	357.04
2005	393	66.27%	131	22.09%	56	9.44%	13	2.19%	0	0.00%	593	202,962	342.26
2006	385	68.14%	112	19.82%	56	9.91%	12	2.12%	0	0.00%	565	207,982	368.11
2007	385	68.14%	112	19.82%	56	9.91%	12	2.12%	0	0.00%	565	220,838	390.86
2008	237	68.70%	56	16.23%	39	11.30%	13	3.77%	0	0.00%	345	186,992	542.01
2009	237	68.70%	56	16.23%	39	11.30%	13	3.77%	0	0.00%	345	151,714	439.75
2010	304	68.01%	74	16.55%	48	10.74%	21	4.70%	0	0.00%	447	160,949	360.06
2011	304	68.01%	74	16.55%	48	10.74%	21	4.70%	0	0.00%	447	154,784	346.27
2012	290	68.08%	70	16.43%	47	11.03%	19	4.46%	0	0.00%	426	145,444	341.42
2013	290	68.08%	70	16.43%	47	11.03%	19	4.46%	0	0.00%	426	144,754	339.80
2014	293	67.82%	73	16.90%	46	10.65%	20	4.63%	0	0.00%	432	139,554	323.04
2015	265	67.26%	64	16.24%	46	11.68%	19	4.82%	0	0.00%	394	138,254	350.90
2016	257	67.10%	63	16.45%	44	11.49%	19	4.96%	0	0.00%	383	158,525	413.90
2017	260	66.84%	63	16.20%	45	11.57%	21	5.40%	0	0.00%	389	159,066	408.91
2018	258	72.68%	39	10.99%	46	12.96%	12	3.38%	0	0.00%	355	159,493	449.28
Average Annual Growth Rate													
1990-2000	2.88%	1.67%	-4.05%	-5.17%	10.31%	9.01%	0.80%	-0.38%	N/A	N/A	1.19%	-0.55%	-1.72%
2000-2010	-2.54%	0.26%	-5.55%	-2.84%	-1.53%	1.29%	4.91%	7.92%	N/A	N/A	-2.79%	-3.91%	-1.16%
2010-2018	-2.03%	0.83%	-7.69%	-5.00%	-0.53%	2.38%	-6.76%	-4.03%	N/A	N/A	-2.84%	-0.11%	2.81%

Sources: FAA 2017 TAF, airport personnel, and Michael Baker International, Inc., 2019.



Figure 3-3: Historical and Baseline Based Aircraft (1990-2018)



Sources: FAA 2017 TAF, airport personnel, and Michael Baker International, Inc., 2019.

3.4 Factors and Opportunities Affecting Activity Levels

This section describes past and present trends that may influence PDK’s operations and based aircraft levels during the 22-year planning period. Several historical and anticipated trends have been presented in earlier sections of this chapter, such as the significant need for new pilot training to support worldwide aviation activity, the based aircraft waiting list, and events in the Atlanta area that produce peaks at PDK. There are also other trends that the FAA recommends identifying and evaluating as part of a forecasting effort including economic conditions, airport-specific factors (e.g., annual fuel flowage), the FAA Aerospace Forecast Fiscal Years 2018-2038, General Aviation Manufacturers Association (GAMA) trends, and other relevant forecasts for PDK. Although drones, multi-modal transportation, private space travel, and autonomous vehicles were popular discussion items for airports at the time of this writing, those types of trends were not anticipated to have any substantial impacts on the forecasts presented in this Master Plan Update and were therefore not evaluated in this chapter.



3.4.1 Economic Conditions

The economic conditions surrounding an airport have the potential to influence activity levels. For example, the growth or decline in a local population may correlate to the growth or decline in operations and based aircraft levels at an airport. **Table 3-5** summarizes historical and forecast population of the 10-county area covered by the Atlanta Regional Commission (ARC) and historical data for the City of Atlanta (refer to **Figure 3-4**). The forecasts were produced by the ARC in 2017 with a base year of 2016 and a forecast year of 2040. It is noted that the U.S. Census Bureau reported a July 1, 2017 population of 753,253 for DeKalb County and 486,290 for the City of Atlanta. According to information from DeKalb County, the population of the county grew the largest amount between 2017 and 2018 since between 2000 and 2001. DeKalb County CEO Michael Thurmond indicated that “DeKalb County is becoming the preferred location for many residents and business,” and “emphasized county strengths including an extensive interstate highway system, the second busiest airport in the state, a strong public transit network, improving public school system, numerous higher education and technical schools and incomparable healthcare facilities like the CDC, Emory, DeKalb Medical and Children’s Healthcare of Atlanta” (obtained from a press release on dekalbcountyga.gov dated August 22, 2018). “The City of Atlanta, which lost population between 1970 and 2000, is growing again amid a boom in multifamily housing. The city added 10,100 residents in the past year (2017 to 2018), compared to 9,700 the year before, and has grown by 9.00 percent since 2010.” (obtained from a press release on atlantaregional.org dated August 22, 2018). The U.S. Census Bureau lists Atlanta as the 10th fastest growing cities in the country between 2016 and 2017 and the Atlanta Metropolitan Statistical Area (MSA) as the ninth most populated MSA in the country. By 2040, the ARC projects the top employment sectors in the 10-county area to be health care, retail, education, scientific, and other professional services.

With the airport’s proximity to Downtown Atlanta and the growing 10-county area, it is anticipated that the projected population and employment growth will result in additional aviation activity at PDK. Although the historical population growth of the area has not produced increasing GA activity over the long-term, the activity at PDK appears to have stabilized and is trending upwards. As shown in **Figure 3-5**, the historical unemployment rate of the City of Atlanta, DeKalb County, and State of Georgia has tracked similarly to that of the country since at least 2006. Georgia continues to be a popular state for business relocations and start-ups. The 2011 Georgia Statewide Airport Economic Impact Study estimated the total economic impact of airports in the state to be \$62.63 billion annually and PDK’s impact to be \$211.7 million annually, both of which would be much higher if reevaluated under the economy in 2018/2019. Consequently, the economic conditions surrounding PDK and the growth in the aviation industry surrounding the Atlanta area should result in increasing levels of activity and based aircraft at the airport over the course of the 22-year planning period.



Figure 3-4: 10-County Region

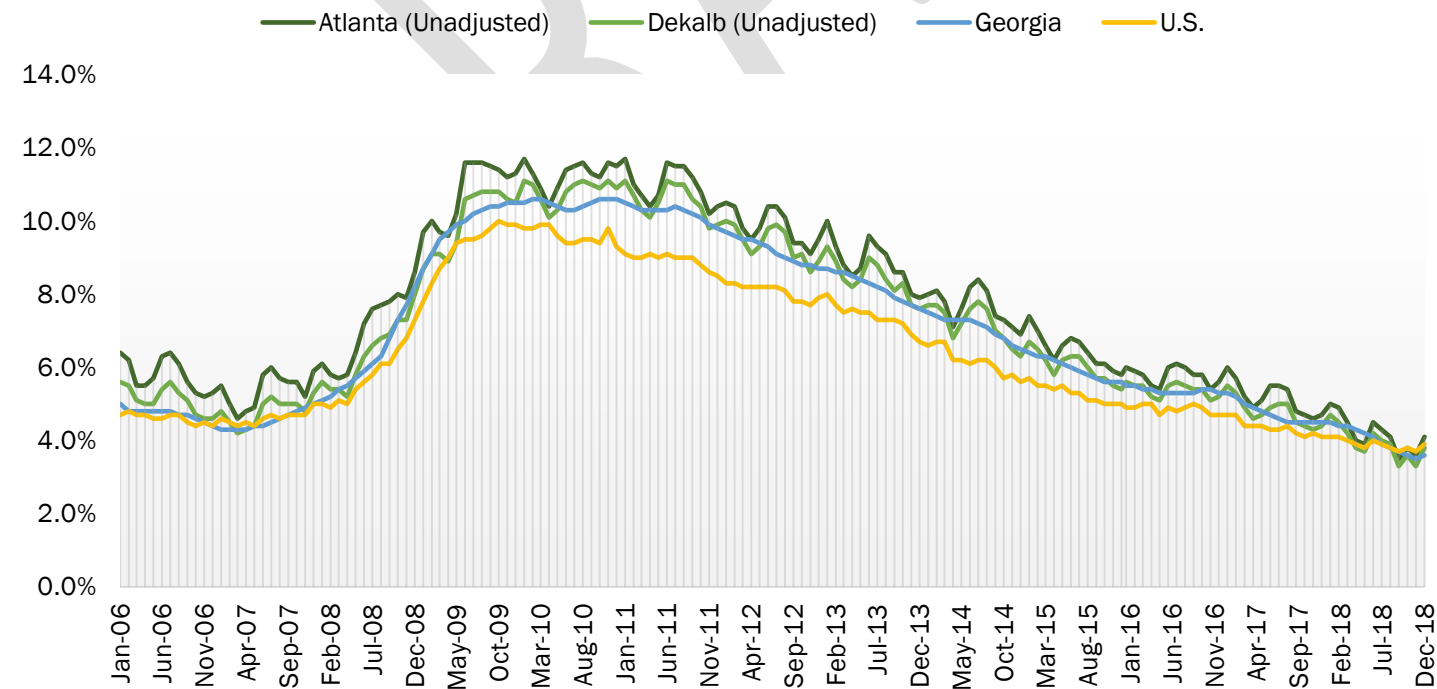


Table 3-5: Historical and Forecast Growth Rates (1970-2040)

Year	Region	Cherokee	Clayton	Cobb	DeKalb	Douglas	Fayette	Fulton	Gwinnett	Henry	Rockdale	City
1970	1,500,823	31,059	98,126	196,793	415,387	28,659	11,364	605,210	72,349	23,724	18,152	495,039
1980	1,896,182	51,699	150,357	297,718	483,024	54,573	29,043	589,904	166,808	36,309	36,747	424,922
1990	2,557,800	91,000	184,100	453,400	553,800	71,700	62,800	670,800	356,500	59,200	54,500	415,200
2000	3,429,379	141,903	236,517	607,751	665,865	92,174	91,263	816,006	588,448	119,341	70,111	416,474
2010	4,107,750	214,346	259,424	688,078	691,893	132,403	106,567	920,581	805,321	203,922	85,215	420,003
2016	4,401,800	240,100	270,600	737,500	725,000	139,000	112,300	985,700	877,100	223,600	90,900	439,600
2017	4,480,100	247,400	275,300	750,300	733,900	140,900	114,000	1,002,800	894,000	229,000	92,500	449,500
2018	4,555,900	254,500	279,400	758,300	744,530	142,800	116,200	1,020,370	910,700	234,800	94,300	459,600
2040	5,918,557	392,411	327,552	885,062	874,424	201,325	143,255	1,264,376	1,350,358	351,691	128,103	N/A
Average Annual Growth Rate (AAGR)												
1970-2000	2.79%	5.19%	2.98%	3.83%	1.59%	3.97%	7.19%	1.00%	7.24%	5.53%	4.61%	-0.57%
2000-2010	1.82%	4.21%	0.93%	1.25%	0.38%	3.69%	1.56%	1.21%	3.19%	5.50%	1.97%	0.08%
2010-2016	1.16%	1.91%	0.71%	1.16%	0.78%	0.81%	0.88%	1.15%	1.43%	1.55%	1.08%	0.76%
2016-2018	1.74%	2.96%	1.61%	1.40%	1.34%	1.36%	1.72%	1.74%	1.90%	2.47%	1.85%	2.25%
2018-2040	1.20%	1.99%	0.73%	0.71%	0.73%	1.57%	0.96%	0.98%	1.81%	1.85%	1.40%	N/A

Sources: Atlanta Regional Commission and Michael Baker International, Inc., 2019.

Figure 3-5: Historical Unemployment Rates (2006-2018)



Sources: U.S. Bureau of Labor Statistics and Michael Baker International, Inc., 2019.

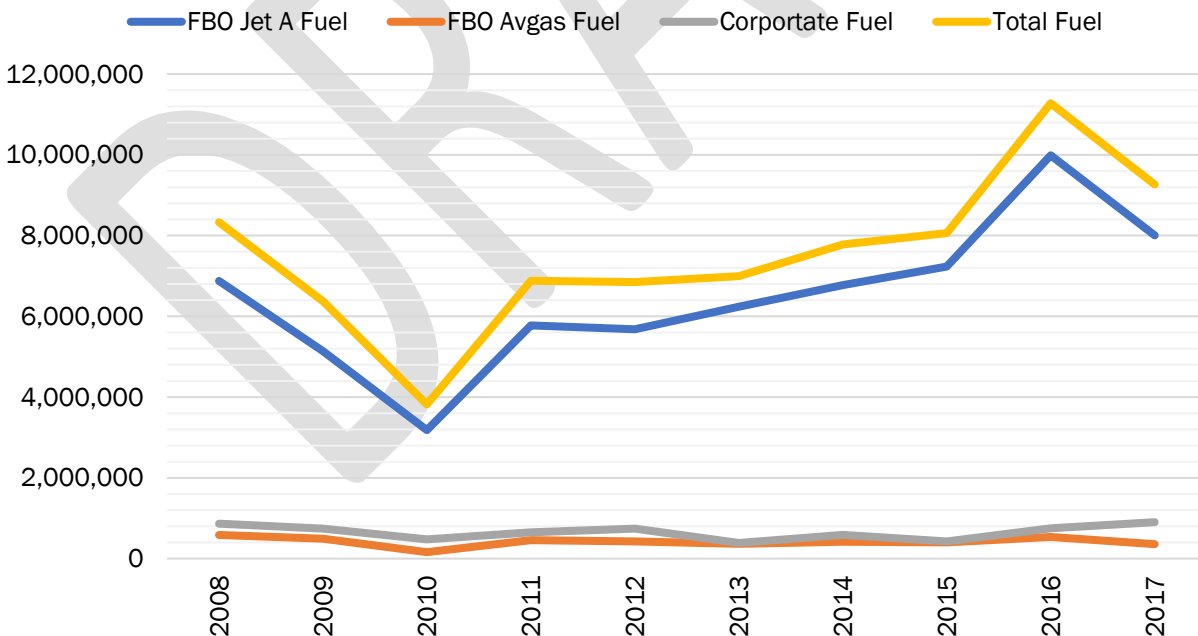


3.4.2 Airport-Specific Factors

As shown in **Figure 3-6** and **Table 3-6**, the fuel flowage at PDK also dropped during the economic recession and began to increase again starting in 2011. Compared to 2008, there were 2,948,121 more gallons of fuel pumped at PDK in 2016 despite there being 28,467 fewer operations. Most of the fuel pumped is Jet A, which reflects both the growth in based jets at PDK since 2008 and the increased prevalence of GA jet activity in the Atlanta area. The airport’s revenues from rental cars more than doubled from 2008 to 2017 and the total number of gallons pumped per operation also increased. These important airport-specific trends are revealing for the recent activity at PDK. They illustrate strong growth over a short period of time and help to frame what has occurred at PDK as aviation activity has continued to grow in the Atlanta area.

As mentioned, the airport recently conducted a survey to determine what the demand is for new based aircraft tenants. Based on 31 responses that were received, all 31 individuals are interested in basing an aircraft in a hangar at PDK if space becomes available and would collectively conduct more than 2,000 operations at the airport each year. The respondents included a mix of individuals who would purchase a new aircraft if hangar space were available, would relocate from another airport, or would relocate from an existing hangar or tiedown at PDK to a new hangar. The aircraft include a mix of pistons and turboprops. The survey, combined with the based aircraft waiting list where individuals or organizations must pay a fee to be included, illustrates the immediate growth that would occur at PDK if new hangars were available.

Figure 3-6: Historical Fuel Flowage in Gallons (2008-2017)



Sources: Airport Records and Michael Baker International, Inc., 2019.



Table 3-6: Aircraft Fuel Flowage and Rental Car Revenue (2008-2017)

Year	FBO Jet A Fuel		FBO Avgas Fuel		Corporate Fuel		Total Gallons	Total Operations	Gallons Per Operation	Rental Car Revenue
	Gallons	% of Total	Gallons	% of Total	Gallons	% of Total				
2008	6,876,920	82.57%	585,859	7.03%	866,185	10.40%	8,328,964	186,992	44.54	\$63,998
2009	5,137,644	80.61%	492,373	7.73%	743,273	11.66%	6,373,289	151,714	42.01	\$51,776
2010	3,182,001	83.32%	159,411	4.17%	477,600	12.51%	3,819,012	160,949	23.73	\$49,195
2011	5,774,268	83.91%	455,053	6.61%	652,548	9.48%	6,881,869	154,784	44.46	\$86,826
2012	5,680,566	82.93%	426,681	6.23%	742,348	10.84%	6,849,594	145,444	47.09	\$76,204
2013	6,239,430	89.22%	366,688	5.24%	387,455	5.54%	6,993,573	144,754	48.31	\$88,950
2014	6,773,836	87.06%	418,573	5.38%	587,856	7.56%	7,780,266	139,554	55.75	\$90,698
2015	7,232,596	89.73%	401,612	4.98%	426,302	5.29%	8,060,509	138,254	58.30	\$77,288
2016	9,987,603	88.57%	538,023	4.77%	751,459	6.66%	11,277,085	158,525	71.14	\$113,912
2017	8,007,488	86.41%	357,299	3.86%	902,147	9.74%	9,266,934	159,066	58.26	\$135,224
Average Annual Growth Rate (AAGR)										
2008-2017	1.71%	0.51%	-5.35%	-6.46%	0.45%	-0.73%	1.19%	-1.78%	3.03%	8.67%
2012-2017	7.11%	0.82%	-3.49%	-9.15%	3.98%	-2.12%	6.23%	1.81%	4.35%	12.15%
2008-2016	4.78%	0.88%	-1.06%	-4.74%	-1.76%	-5.41%	3.86%	-2.04%	6.03%	7.47%

Sources: Airport Records and Michael Baker International, Inc., 2019.



3.4.3 FAA Terminal Area Forecast (TAF)

The FAA develops a TAF each year for all airports in the NPIAS. Depending upon the subject airport's level of service (i.e., commercial or general aviation), the TAF may present forecasts of passenger enplanements, operations, and based aircraft. The FAA website indicates that the "TAF system is the official forecast of aviation activity at FAA facilities. These forecasts are prepared to meet the budget and planning needs of FAA and provide information for use by state and local authorities, the aviation industry, and the public." **Table 3-7** illustrates the growth projections for ATL and the four GA Reliever airports to ATL as obtained from the FAA's most recent edition of the TAF (2017 TAF). As identified in the NPIAS, the four GA Reliever airports to ATL include PDK, Fulton County Airport-Brown Field (FTY), Cobb County International Airport-McCollum Field (RYY), and Gwinnett County Airport-Briscoe Field (LZU). Although the TAF illustrates growth of over one percent per year for operations at ATL between 2018 and 2040, the TAF illustrates slower growth for the four GA Reliever airports, with PDK projected to experience the strongest AAGR of 0.42 percent. All four GA Reliever airports are projected to experience much higher based aircraft growth rates between 2018 and 2040 compared to operations. This information is utilized in subsequent portions of this chapter to evaluate potential growth scenarios for PDK and to compare the selected operations and based aircraft forecast to the TAF.

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Table 3-7: FAA 2017 TAF Growth Projections (2000-2040)

Operations					
Year	PDK	FTY	RYY	LZU	ATL
2000	238,740	118,265	108,199	113,130	922,016
2010	156,157	70,817	65,294	70,807	956,546
2018	159,454	49,571	62,680	98,022	879,757
2020	160,680	49,934	62,852	98,302	908,428
2038	173,294	53,337	64,422	100,895	1,227,304
2040	174,896	53,728	64,600	101,191	1,269,418
Average Annual Growth Rate (AAGR)					
2000-2010	-4.16%	-5.00%	-4.93%	-4.58%	0.37%
2010-2018	0.26%	-4.36%	-0.51%	4.15%	-1.04%
2018-2038	0.42%	0.37%	0.14%	0.14%	1.68%
2020-2040	0.42%	0.37%	0.14%	0.14%	1.69%
Based Aircraft					
Year	PDK	FTY	RYY	LZU	ATL
2000	593	310	311	280	6
2010	345	128	275	304	3
2018	395	87	295	224	3
2020	405	94	298	231	3
2038	512	158	342	306	3
2040	524	168	348	314	3
Average Annual Growth Rate (AAGR)					
2000-2010	-5.27%	-8.47%	-1.22%	0.83%	-6.70%
2010-2018	1.71%	-4.71%	0.88%	-3.75%	0.00%
2018-2038	1.31%	3.03%	0.74%	1.57%	0.00%
2020-2040	1.30%	2.95%	0.78%	1.55%	0.00%

Sources: FAA 2017 TAF and Michael Baker International, Inc., 2019.



3.4.4 GAMA Trends

The General Aviation Manufacturers Association (GAMA) is a trade organization that monitors and reports on the GA industry. GAMA tracks quarterly shipments and billings for GA aircraft deliveries. The first nine months of 2018 saw the largest increase in deliveries of all aircraft types since the Great Recession. **Table 3-8** summarizes the comparison of shipments between the first nine months of 2017 and 2018 as obtained from GAMA. GAMA develops an annual report each year that presents forecasts for GA aircraft including the size of the fleet and hours flown. They utilize the forecasts from the latest FAA Aerospace Forecast, which is currently for Fiscal Years 2018-2038. The FAA Aerospace Forecasts are utilized to evaluate potential growth scenarios for PDK in subsequent sections of this chapter.

Table 3-8: GA Aircraft Deliveries Comparison (First Nine Months of 2017 and 2018)

Year	Fixed-Wing				Rotorcraft		
	Piston	Turboprop	Jet	Total	Piston	Turbine	Total
2017	724	374	433	1,531	190	471	661
2018	784	395	446	1,625	220	510	730
Average Annual Growth Rate (AAGR)							
2017-2018	8.3%	5.6%	3.0%	6.1%	15.8%	8.3%	10.4%

Source: GAMA.

3.5 Based Aircraft Forecasts

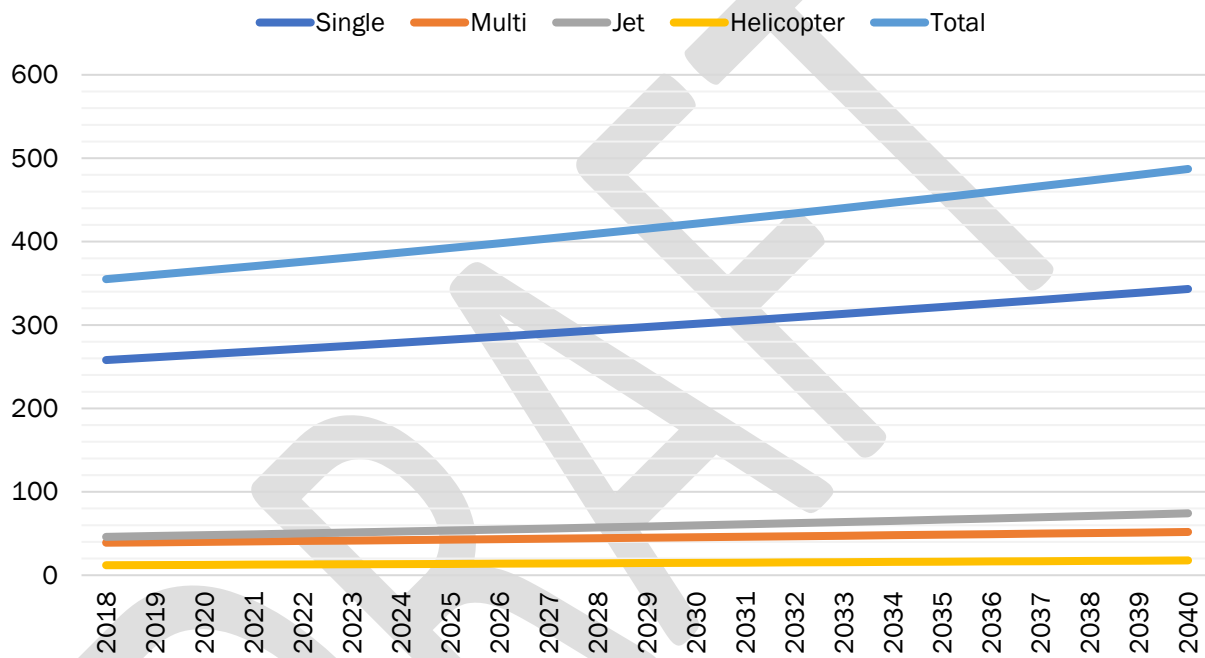
There were more than 60 T-hangars constructed at PDK in 2013 to help fulfill the demands of a waiting list for hangar space at the airport. Based on 31 responses that were received during the recent survey effort, all 31 individuals are interested in basing an aircraft in a hangar at PDK if space becomes available. Of the 31, 20 would be new based aircraft at PDK including nine that would relocate their aircraft from another airport and 11 that would purchase new aircraft. The new based aircraft would consist of 18 single-engine pistons, one multi-engine piston, and one single-engine turboprop. Although the survey did not evaluate the demand for corporate aircraft hangar space at PDK, DeKalb County is exploring opportunities to develop several hangars in the southwest quadrant of the airport. Therefore, the ability to provide hangar space is the only factor affecting the growth in based aircraft at PDK. The 2017 TAF projects the based aircraft fleet to grow stronger at PDK than the nation from 2018 to 2038. The FAA Aerospace Forecast Fiscal Years 2018-2038 projects virtually no growth in the nationwide GA fleet from 2018 to 2038 and a decline in fixed-wing piston aircraft. The 2017 TAF AAGR of 1.31 percent from 2018 to 2038 is close to the anticipated AAGR of the 10-County population from 2018 to 2040 (i.e., 1.20 percent).

As shown in **Figure 3-7** and **Table 3-9**, the forecasts of based aircraft growth for PDK employed the growth rate of 1.31 percent for single-engines and multi-engines, which includes a combination of pistons and turboprops. The growth rates for jets and helicopters were obtained from the FAA Aerospace Forecast Fiscal Years 2018-2038 for Active General Aviation and Air Taxi Aircraft. This forecast adds 132 additional based aircraft to PDK’s fleet over the 22-year period including 85 single-engines, 13 multi-engines, 28 jets,



and six helicopters. This forecast produces growth rates that are consistent with the FAA’s expectations for PDK and was conducted in an unconstrained manner (i.e., without assuming facilities can or cannot be provided at PDK to accommodate the additional based aircraft). It also shows what may be expected for a busy GA airport in a major metropolitan area where there are 26 “2018 Fortune 1000” companies have headquarters, of which 15 of those companies are Fortune 500 companies including The Home Depot (#23), United Parcel Service (UPS) (#44), Delta Air Lines (#75), and The Coca-Cola Company (#87).

Figure 3-7: Based Aircraft Forecasts (2018-2040)



Source: Michael Baker International, Inc., 2019.



Table 3-9: Based Aircraft Forecasts (2018-2040)

Year	Single-Engine		Multi-Engine		Jet		Helicopter		Other		Total Based Aircraft
	Based	% of Total	Based	% of Total	Based	% of Total	Based	% of Total	Based	% of Total	
2018	258	72.68%	39	10.99%	46	12.96%	12	3.38%	0	0.00%	355
2019	250	71.71%	40	11.32%	47	13.47%	12	3.50%	0	0.00%	349
2020	253	71.61%	40	11.31%	48	13.57%	12	3.51%	0	0.00%	354
2021	257	71.51%	41	11.29%	49	13.67%	13	3.53%	0	0.00%	359
2022	260	71.41%	41	11.28%	50	13.78%	13	3.54%	0	0.00%	364
2023	264	71.31%	42	11.26%	51	13.88%	13	3.55%	0	0.00%	370
2024	267	71.21%	42	11.24%	52	13.98%	13	3.56%	0	0.00%	375
2025	270	71.11%	43	11.23%	54	14.08%	14	3.57%	0	0.00%	380
2026	274	71.01%	43	11.21%	55	14.19%	14	3.59%	0	0.00%	386
2027	278	70.91%	44	11.20%	56	14.29%	14	3.60%	0	0.00%	391
2028	281	70.81%	44	11.18%	57	14.40%	14	3.61%	0	0.00%	397
2029	285	70.71%	45	11.16%	58	14.50%	15	3.62%	0	0.00%	403
2030	289	70.60%	46	11.15%	60	14.61%	15	3.64%	0	0.00%	409
2031	292	70.50%	46	11.13%	61	14.72%	15	3.65%	0	0.00%	415
2032	296	70.40%	47	11.12%	62	14.83%	15	3.66%	0	0.00%	421
2033	300	70.29%	47	11.10%	64	14.94%	16	3.67%	0	0.00%	427
2034	304	70.19%	48	11.08%	65	15.05%	16	3.69%	0	0.00%	433
2035	308	70.08%	49	11.07%	67	15.15%	16	3.70%	0	0.00%	439
2036	312	69.97%	49	11.05%	68	15.27%	17	3.71%	0	0.00%	446
2037	316	69.87%	50	11.03%	70	15.38%	17	3.72%	0	0.00%	452
2038	320	69.76%	51	11.01%	71	15.49%	17	3.74%	0	0.00%	459
2039	339	70.57%	51	10.67%	73	15.13%	17	3.64%	0	0.00%	480
2040	343	70.46%	52	10.65%	74	15.24%	18	3.65%	0	0.00%	487
Growth Rates											
AAGR 2018-2038	1.31%	-0.14%	1.31%	-0.14%	2.20%	0.74%	1.80%	0.34%	N/A	N/A	1.45%
AAGR 2018-2040	1.31%	-0.14%	1.31%	-0.14%	2.20%	0.74%	1.80%	0.35%	N/A	N/A	1.45%
AAGR 2020-2040	1.31%	-0.14%	1.31%	-0.14%	2.20%	0.74%	1.80%	0.35%	N/A	N/A	1.45%
Increase 2018-2038	76	N/A	12	N/A	25	N/A	5	N/A	0	N/A	118
Increase 2018-2040	85	N/A	13	N/A	28	N/A	6	N/A	0	N/A	132
Increase 2020-2040	78	N/A	12	N/A	26	N/A	5	N/A	0	N/A	122

Source: Michael Baker International, Inc., 2019.



3.6 Operations Forecasts

The 2017 TAF projects an AAGR of 0.42 percent for total operations at PDK between 2018 and 2038, which is significantly less than the 2017 TAF AAGR of 1.31 percent for total based aircraft. As described throughout this chapter, there is a high demand for based aircraft hangar storage at PDK. As new hangars continue to be developed, it is anticipated that a combination of existing tenants and new tenants will occupy them. PDK is also the premier GA airport in the Atlanta area and attracts a significant amount of visiting traffic during popular sporting and other events. With the known demand for based aircraft hangar storage at PDK and the growing number of major events that are held in the Atlanta area each year, it is anticipated that operations at PDK would increase similarly to based aircraft.

Table 3-10 and **Figure 3-8** present seven forecasts for operations growth at PDK during the planning period. These forecasts were developed by applying growth rates from various trends presented within this chapter and include national, local, and airport-specific trends. A description of each forecast is provided below.

1. **TAF** – Applied the 2017 TAF growth rate for operations at PDK.
2. **Based Aircraft** – Applied the growth rate utilized for the based aircraft forecast.
3. **Population** – Applied the forecast growth rate for the 10-county region.
4. **OPBA** – Applied the 2018 OPBA factor to the based aircraft forecast.
5. **TFMSC** – Applied the historical growth rate in flight plan activity from 2012 to 2018.
6. **Average** – Applied the average of the five previous forecasts.
7. **Average (Smoothed)** – Applied an even growth rate to the previous forecast.

After reviewing the forecasts and comparing them to the 2017 TAF, all the forecasts were found to be consistent with the TAF. According to the FAA's June 2008 Review and Approval of Aviation Forecasts guidance, total operations and based aircraft forecasts are considered consistent with the TAF if they differ by less than 10 percent in the five-year forecast period and 15 percent in the 10-year forecast period. Therefore, it was determined that the growth rate from the based aircraft forecast would be selected to forecast total operations for PDK for the 22-year planning period. That maintains the OPBA at the same number throughout the planning period and increases operations from 159,493 in 2018 to 218,797 by 2040.

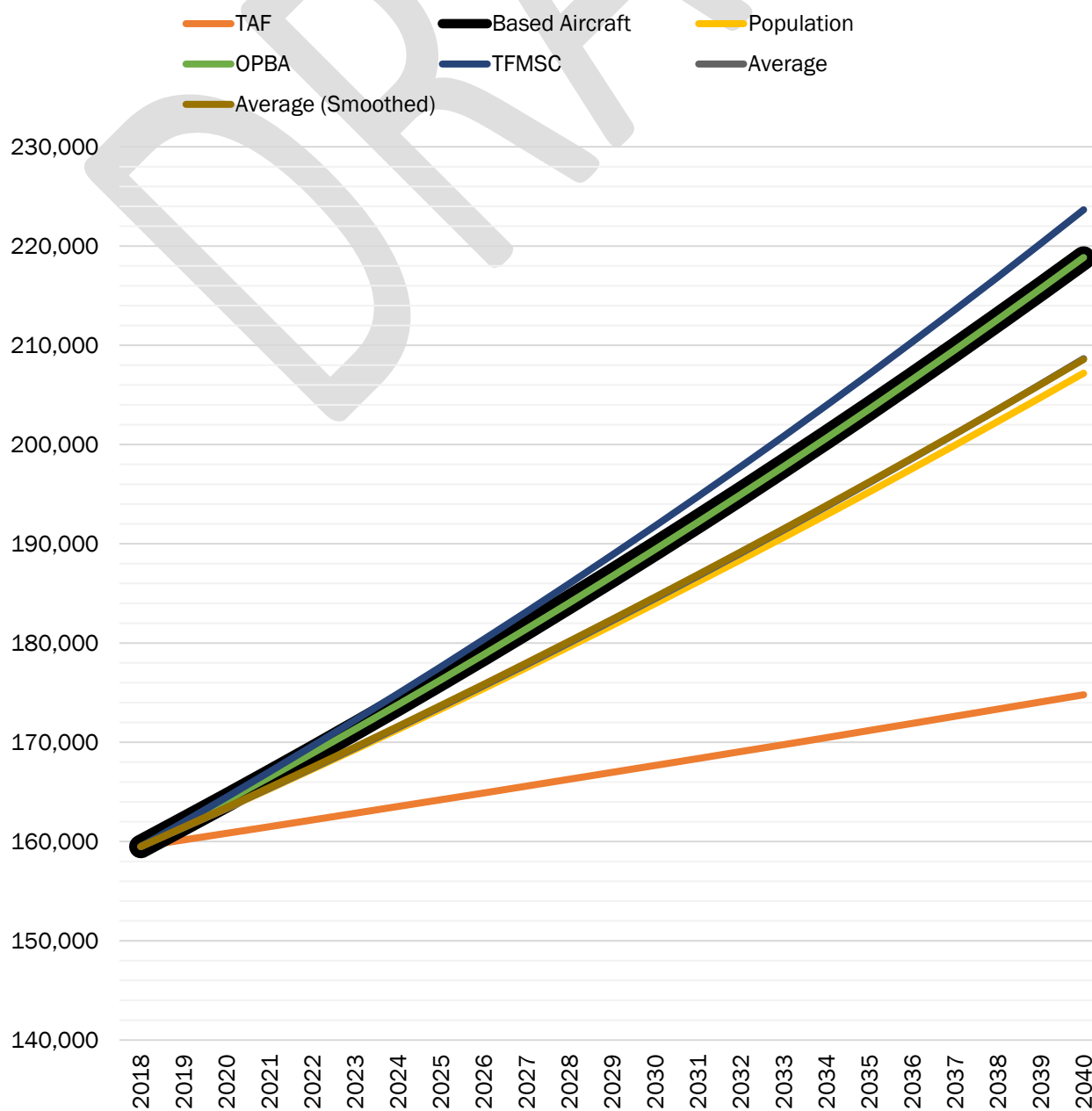
Table 3-11 illustrates the forecast of local and itinerant operations during the planning period. This forecast was produced by keeping air carrier and military operations at the same levels throughout the planning period and splitting the remaining activity by their respective percentages in 2018. **Table 3-12** illustrates the forecast of operations by aircraft type. This forecast was produced by increasing the turboprop, jet, and helicopter operations at the growth rates in the FAA Aerospace Forecast Fiscal Years 2018-2038 for Active General Aviation and Air Taxi Aircraft and the piston aircraft comprised the remainder. The number of helicopters in 2018 was estimated from a previous noise modeling effort for PDK. The number of jet operations is forecast to increase from 39,729 in 2018 to 64,125 by 2040. This forecast is further analyzed in the next chapter of this Master Plan Update to identify the critical aircraft for each runway.

Table 3-10: Total Operations Forecast (2018-2040)

Year	TAF	Based Aircraft	Population	OPBA	TFMSC	Average	Average (Smoothed)	Total Based Aircraft	OPBA
2018	159,493	159,493	159,493	159,493	159,493	159,493	159,493	355	449.28
2019	160,158	161,801	161,401	161,787	161,963	161,422	161,450	360	449.32
2020	160,826	164,143	163,333	164,115	164,471	163,378	163,431	365	449.35
2021	161,497	166,519	165,287	166,479	167,018	165,360	165,436	371	449.39
2022	162,170	168,929	167,264	168,878	169,605	167,369	167,466	376	449.41
2023	162,847	171,374	169,266	171,313	172,232	169,406	169,521	381	449.44
2024	163,526	173,855	171,291	173,785	174,899	171,471	171,601	387	449.46
2025	164,208	176,371	173,341	176,294	177,608	173,564	173,706	392	449.47
2026	164,892	178,924	175,415	178,841	180,358	175,686	175,838	398	449.48
2027	165,580	181,514	177,514	181,427	183,151	177,837	177,995	404	449.49
2028	166,271	184,141	179,637	184,052	185,988	180,018	180,179	410	449.49
2029	166,964	186,806	181,787	186,717	188,868	182,228	182,390	416	449.49
2030	167,660	189,510	183,962	189,422	191,793	184,470	184,628	422	449.49
2031	168,360	192,253	186,163	192,168	194,763	186,741	186,893	428	449.47
2032	169,062	195,036	188,391	194,956	197,780	189,045	189,187	434	449.46
2033	169,767	197,859	190,645	197,786	200,843	191,380	191,508	440	449.44
2034	170,475	200,722	192,926	200,660	203,953	193,747	193,858	447	449.42
2035	171,186	203,628	195,234	203,577	207,112	196,147	196,236	453	449.39
2036	171,900	206,575	197,570	206,539	210,319	198,581	198,644	460	449.36
2037	172,617	209,565	199,934	209,545	213,576	201,047	201,081	466	449.32
2038	173,336	212,598	202,326	212,598	216,884	203,549	203,549	473	449.28
2039	174,059	215,675	204,747	215,698	220,243	206,084	206,046	480	449.23
2040	174,785	218,797	207,197	218,845	223,654	208,656	208,574	487	449.18
Average Annual Growth Rate (AAGR)									
2018-2038	0.42%	1.45%	1.20%	1.45%	1.55%	1.23%	1.23%	1.45%	0.00%
2018-2040	0.42%	1.45%	1.20%	1.45%	1.55%	1.23%	1.23%	1.45%	0.00%
2020-2040	0.42%	1.45%	1.20%	1.45%	1.55%	1.23%	1.23%	1.45%	0.00%

Source: Michael Baker International, Inc., 2019.

Figure 3-8: Total Operations Forecast (2018-2040)



Source: Michael Baker International, Inc., 2019.

Table 3-11: Forecast of Local and Itinerant Operations (2018-2040)

Year	Itinerant						Local				Total
	Air Carrier	Air Taxi	GA	MIL	Total	% of Total	Civil	MIL	Total	% of Total	
2018	49	20,058	94,563	429	115,099	72.17%	44,337	57	44,394	27.83%	159,493
2019	49	20,350	95,937	429	116,765	72.17%	44,980	57	45,037	27.83%	161,801
2020	49	20,645	97,332	429	118,455	72.17%	45,631	57	45,688	27.83%	164,143
2021	49	20,945	98,746	429	120,169	72.17%	46,293	57	46,350	27.83%	166,519
2022	49	21,250	100,181	429	121,909	72.17%	46,964	57	47,021	27.83%	168,929
2023	49	21,558	101,637	429	123,673	72.17%	47,644	57	47,701	27.83%	171,374
2024	49	21,872	103,114	429	125,463	72.17%	48,335	57	48,392	27.83%	173,855
2025	49	22,189	104,612	429	127,279	72.17%	49,035	57	49,092	27.83%	176,371
2026	49	22,512	106,132	429	129,122	72.17%	49,746	57	49,803	27.83%	178,924
2027	49	22,839	107,674	429	130,990	72.17%	50,466	57	50,523	27.83%	181,514
2028	49	23,171	109,238	429	132,886	72.17%	51,198	57	51,255	27.83%	184,141
2029	49	23,507	110,825	429	134,810	72.17%	51,940	57	51,997	27.83%	186,806
2030	49	23,849	112,434	429	136,761	72.17%	52,692	57	52,749	27.83%	189,510
2031	49	24,195	114,067	429	138,740	72.17%	53,456	57	53,513	27.83%	192,253
2032	49	24,547	115,724	429	140,749	72.17%	54,230	57	54,287	27.83%	195,036
2033	49	24,903	117,405	429	142,786	72.17%	55,016	57	55,073	27.83%	197,859
2034	49	25,265	119,110	429	144,852	72.17%	55,813	57	55,870	27.83%	200,722
2035	49	25,632	120,839	429	146,949	72.17%	56,622	57	56,679	27.83%	203,628
2036	49	26,004	122,594	429	149,076	72.17%	57,442	57	57,499	27.83%	206,575
2037	49	26,381	124,374	429	151,234	72.17%	58,274	57	58,331	27.83%	209,565
2038	49	26,764	126,180	429	153,423	72.17%	59,119	57	59,176	27.83%	212,598
2039	49	27,153	128,012	429	155,643	72.17%	59,975	57	60,032	27.83%	215,675
2040	49	27,547	129,871	429	157,896	72.17%	60,844	57	60,901	27.83%	218,797
Average Annual Growth Rate (AAGR)											
2018-2038	0.00%	1.45%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%
2018-2040	0.00%	1.45%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%
2020-2040	0.00%	1.45%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%	0.00%	1.45%

Source: Michael Baker International, Inc., 2019.

Table 3-12: Forecast of Operations by Aircraft Type (2018-2040)

Year	Piston	Turboprop	Jet	Helicopter	Total Operations
2018	95,688	14,564	39,729	9,512	159,493
2019	96,704	14,812	40,603	9,683	161,801
2020	97,726	15,063	41,496	9,858	164,143
2021	98,756	15,319	42,409	10,035	166,519
2022	99,792	15,580	43,342	10,216	168,929
2023	100,835	15,845	44,296	10,399	171,374
2024	101,884	16,114	45,270	10,587	173,855
2025	102,940	16,388	46,266	10,777	176,371
2026	104,002	16,667	47,284	10,971	178,924
2027	105,071	16,950	48,324	11,169	181,514
2028	106,146	17,238	49,387	11,370	184,141
2029	107,227	17,531	50,474	11,574	186,806
2030	108,314	17,829	51,584	11,783	189,510
2031	109,407	18,132	52,719	11,995	192,253
2032	110,505	18,441	53,879	12,211	195,036
2033	111,610	18,754	55,064	12,430	197,859
2034	112,720	19,073	56,276	12,654	200,722
2035	113,835	19,397	57,514	12,882	203,628
2036	114,955	19,727	58,779	13,114	206,575
2037	116,080	20,062	60,072	13,350	209,565
2038	117,211	20,403	61,394	13,590	212,598
2039	118,346	20,750	62,745	13,835	215,675
2040	119,485	21,103	64,125	14,084	218,797
Average Annual Growth Rate (AAGR)					
2018-2038	1.02%	1.70%	2.20%	1.80%	1.45%
2018-2040	1.01%	1.70%	2.20%	1.80%	1.45%
2020-2040	1.01%	1.70%	2.20%	1.80%	1.45%

Source: Michael Baker International, Inc., 2019.



3.7 Instrument Operations Forecast

According to the FAA report, Forecasting Aviation Activity by Airport, instrument operations consist of “arrivals, departures, and overflights conducted by an FAA approach control facility for aircraft with an Instrument Flight Rule (IFR) flight plan or special Visual Flight Rule (VFR) procedures.” The historical flight plan activity data from the FAA’s TFMSC database was previously presented in **Table 3-3** and consisted of 69,665 operations in 2018. The forecasts of instrument operations considered not only the projected growth in jets and turboprops throughout the planning period, but also some anticipated growth for the piston activity at the airport. Therefore, all future growth in jet and turboprop activity was incorporated into the forecast and 15.40 percent of future piston activity was added which represents the 2018 share of piston and unclassified aircraft instrument operations to total operations. The resulting forecast is presented in **Table 3-13** and increases instrument operations from 69,665 in 2018 to 104,423 by 2040.

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Table 2-13: Instrument Operations Forecast (2018-2040)

Year	Piston	Turboprop	Jet	Total	Total Operations	% of Total
2018	15,372	14,564	39,729	69,665	159,493	43.68%
2019	15,535	14,812	40,603	70,950	161,801	43.85%
2020	15,699	15,063	41,496	72,259	164,143	44.02%
2021	15,865	15,319	42,409	73,593	166,519	44.20%
2022	16,031	15,580	43,342	74,953	168,929	44.37%
2023	16,199	15,845	44,296	76,339	171,374	44.55%
2024	16,367	16,114	45,270	77,752	173,855	44.72%
2025	16,537	16,388	46,266	79,191	176,371	44.90%
2026	16,708	16,667	47,284	80,658	178,924	45.08%
2027	16,879	16,950	48,324	82,154	181,514	45.26%
2028	17,052	17,238	49,387	83,678	184,141	45.44%
2029	17,226	17,531	50,474	85,231	186,806	45.63%
2030	17,400	17,829	51,584	86,814	189,510	45.81%
2031	17,576	18,132	52,719	88,427	192,253	46.00%
2032	17,752	18,441	53,879	90,072	195,036	46.18%
2033	17,930	18,754	55,064	91,748	197,859	46.37%
2034	18,108	19,073	56,276	93,457	200,722	46.56%
2035	18,287	19,397	57,514	95,198	203,628	46.75%
2036	18,467	19,727	58,779	96,973	206,575	46.94%
2037	18,648	20,062	60,072	98,783	209,565	47.14%
2038	18,830	20,403	61,394	100,627	212,598	47.33%
2039	19,012	20,750	62,745	102,507	215,675	47.53%
2040	19,195	21,103	64,125	104,423	218,797	47.73%
Average Annual Growth Rate (AAGR)						
2018-2038	1.02%	1.70%	2.20%	1.86%	1.45%	0.40%
2018-2040	1.01%	1.70%	2.20%	1.86%	1.45%	0.40%
2020-2040	1.01%	1.70%	2.20%	1.86%	1.45%	0.40%

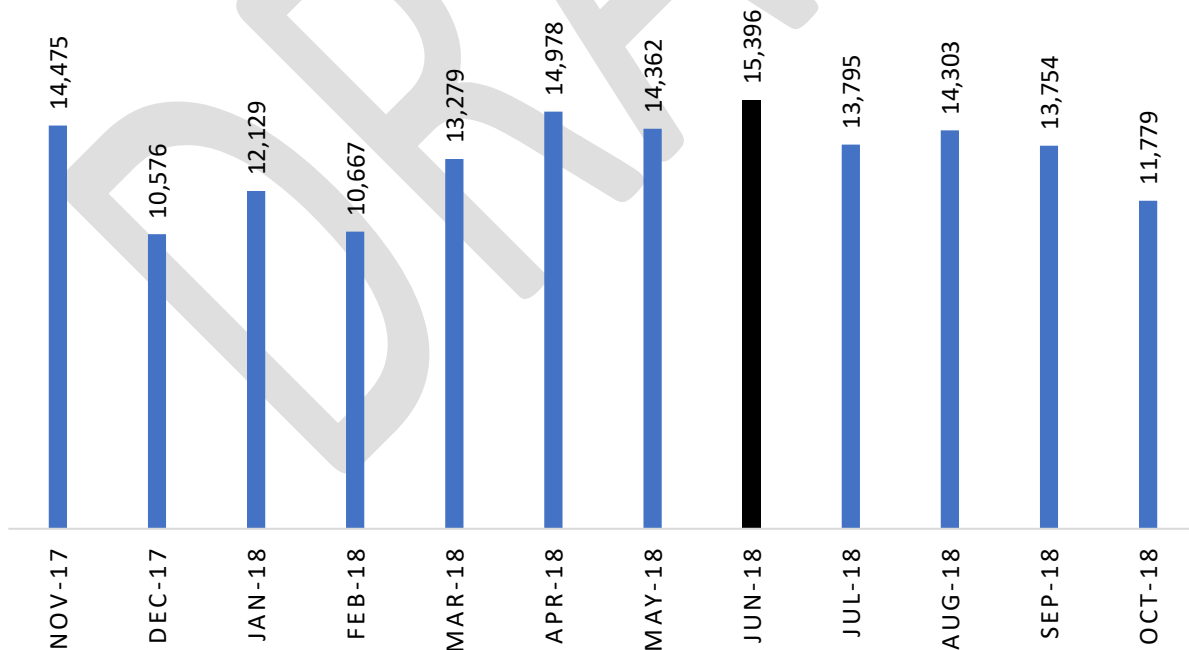
Source: Michael Baker International, Inc., 2019.



3.8 Peak Activity Forecasts

As an airport with an ATCT, it was possible to review historical activity to determine actual peak month and peak day values for PDK. As shown in **Figure 3-9**, the peak month for total activity at PDK during the one-year period between November 2017 and October 2018 was June with 15,396 operations or 9.65 percent of total annual activity. **Table 3-14** further analyzes the 2018 activity data for the peak month and day for itinerant, local, and total activity at PDK. There are max peak values and average peak values shown in the table. The max peak values occur very infrequently and therefore do not represent typical peaking situations for the airport. For example, the airport has experienced more than 500 daily itinerant operations only 10 times since 2012 and more than 300 daily local operations only nine times since 2012. The average peak values are more representative of what the airport experiences as peaks routinely throughout the year. Therefore, the calculated average peak values were used to determine the Average Peak Month (APM) and Average Day Peak Month (ADPM) forecasts for itinerant, local, and total activity over the course of the 22-year planning period (refer to **Table 3-15**). Aircraft flight track radar data from 2016 was reviewed to calculate the Average Day Peak Hour (ADPH) forecasts. The day with the most recorded flight tracks in 2016 was November 27 with 295 records and the busiest hour on that day had 31 records, which represented 10.51 percent of the daily activity. That value was applied to determine the ADPH forecasts throughout the planning period. According to FAA Values for FAA Investment and Regulatory Decisions, A Guide (updated September 2016), GA aircraft average 1.9 passengers per flight, which includes everything from small pistons to large corporate jets. That value was applied to determine the forecast of ADPM and ADPH itinerant passengers during the planning period.

Figure 3-9: 2018 Monthly Peaking Analysis for Total Activity



Sources: FAA OPSET database and Michael Baker International, Inc., 2019.



Table 3-14: 2018 Monthly and Daily Peaking Analysis

Month	Itinerant Peaking Activity					Local Peaking Activity					Total Peaking Activity				
	Annual	Month	% Annual	Day	% Annual	Annual	Month	% Annual	Day	% Annual	Annual	Month	% Annual	Day	% Annual
Nov-17	115,099	10,492	9.12%	413	0.36%	44,394	3,983	8.97%	166	0.37%	159,493	14,475	9.08%	569	0.36%
Dec-17	115,099	8,275	7.19%	510	0.44%	44,394	2,301	5.18%	284	0.64%	159,493	10,576	6.63%	693	0.43%
Jan-18	115,099	9,055	7.87%	467	0.41%	44,394	3,074	6.92%	266	0.60%	159,493	12,129	7.60%	673	0.42%
Feb-18	115,099	8,029	6.98%	472	0.41%	44,394	2,638	5.94%	279	0.63%	159,493	10,667	6.69%	726	0.46%
Mar-18	115,099	10,007	8.69%	463	0.40%	44,394	3,272	7.37%	308	0.69%	159,493	13,279	8.33%	715	0.45%
Apr-18	115,099	10,871	9.44%	495	0.43%	44,394	4,107	9.25%	339	0.76%	159,493	14,978	9.39%	774	0.49%
May-18	115,099	10,041	8.72%	521	0.45%	44,394	4,321	9.73%	308	0.69%	159,493	14,362	9.00%	827	0.52%
Jun-18	115,099	10,293	8.94%	475	0.41%	44,394	5,103	11.49%	294	0.66%	159,493	15,396	9.65%	769	0.48%
Jul-18	115,099	9,644	8.38%	464	0.40%	44,394	4,151	9.35%	254	0.57%	159,493	13,795	8.65%	679	0.43%
Aug-18	115,099	10,059	8.74%	439	0.38%	44,394	4,244	9.56%	220	0.50%	159,493	14,303	8.97%	602	0.38%
Sep-18	115,099	9,329	8.11%	442	0.38%	44,394	4,425	9.97%	208	0.47%	159,493	13,754	8.62%	628	0.39%
Oct-18	115,099	9,004	7.82%	467	0.41%	44,394	2,775	6.25%	266	0.60%	159,493	11,779	7.39%	691	0.43%
Max	Max	10,871	9.44%	521	0.45%	Max	5,103	11.49%	339	0.76%	Max	15,396	9.65%	827	0.52%
Average	Average	9,592	8.33%	469	0.41%	Average	3,700	8.33%	266	0.60%	Average	13,291	8.33%	696	0.44%

Sources: FAA OPSNET database and Michael Baker International, Inc., 2019.

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Table 3-15: Peak Activity Forecasts (2018-2040)

Year	Itinerant Peaking Activity						Local Peaking Activity				Total Peaking Activity			
	Annual	APM	ADPM	ADPH	ADPM Passenger	ADPH Passenger	Annual	APM	ADPM	ADPH	Annual	APM	ADPM	ADPH
2018	115,099	9,592	469	49	891	94	44,394	3,700	181	19	159,493	13,291	650	68
2019	116,765	9,730	476	50	904	95	45,037	3,753	184	19	161,801	13,483	659	69
2020	118,455	9,871	483	51	917	96	45,688	3,807	186	20	164,143	13,679	669	70
2021	120,169	10,014	490	51	930	98	46,350	3,862	189	20	166,519	13,877	679	71
2022	121,909	10,159	497	52	944	99	47,021	3,918	192	20	168,929	14,077	688	72
2023	123,673	10,306	504	53	957	101	47,701	3,975	194	20	171,374	14,281	698	73
2024	125,463	10,455	511	54	971	102	48,392	4,033	197	21	173,855	14,488	708	74
2025	127,279	10,607	519	55	985	104	49,092	4,091	200	21	176,371	14,698	719	76
2026	129,122	10,760	526	55	1,000	105	49,803	4,150	203	21	178,924	14,910	729	77
2027	130,990	10,916	534	56	1,014	107	50,523	4,210	206	22	181,514	15,126	740	78
2028	132,886	11,074	541	57	1,029	108	51,255	4,271	209	22	184,141	15,345	750	79
2029	134,810	11,234	549	58	1,044	110	51,997	4,333	212	22	186,806	15,567	761	80
2030	136,761	11,397	557	59	1,059	111	52,749	4,396	215	23	189,510	15,793	772	81
2031	138,740	11,562	565	59	1,074	113	53,513	4,459	218	23	192,253	16,021	783	82
2032	140,749	11,729	574	60	1,090	115	54,287	4,524	221	23	195,036	16,253	795	84
2033	142,786	11,899	582	61	1,105	116	55,073	4,589	224	24	197,859	16,488	806	85
2034	144,852	12,071	590	62	1,121	118	55,870	4,656	228	24	200,722	16,727	818	86
2035	146,949	12,246	599	63	1,138	120	56,679	4,723	231	24	203,628	16,969	830	87
2036	149,076	12,423	607	64	1,154	121	57,499	4,792	234	25	206,575	17,215	842	88
2037	151,234	12,603	616	65	1,171	123	58,331	4,861	238	25	209,565	17,464	854	90
2038	153,423	12,785	625	66	1,188	125	59,176	4,931	241	25	212,598	17,717	866	91
2039	155,643	12,970	634	67	1,205	127	60,032	5,003	245	26	215,675	17,973	879	92
2040	157,896	13,158	643	68	1,222	128	60,901	5,075	248	26	218,797	18,233	892	94
Average Annual Growth Rate (AAGR)														
2018-2038	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%
2018-2040	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%
2020-2040	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%	1.45%

Source: Michael Baker International, Inc., 2019.



3.9 Forecast Summary

As mentioned earlier in this chapter, the FAA considers total operations and based aircraft forecasts consistent with the TAF if they differ by less than 10 percent in the five-year forecast period and 15 percent in the 10-year forecast period. As shown in **Table 3-16**, the recommended forecasts of this Master Plan Update are considered consistent with the TAF because they do not exceed those thresholds. Note that the comparisons to the 2017 TAF were made based on adjustments that reflect actual values in 2018 but incorporate the same AAGR factors from the 2017 TAF through 2040. The recommended forecasts are used throughout the remainder of this study to plan for the long-term development of PDK.

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Table 3-16: Forecast Summary (2018-2040)

Year	Year +	Operations			Based Aircraft		
		TAF	Recommended	Difference	TAF	Recommended	Difference
2018	0	159,493	159,493	0.00%	355	355	0.00%
2019	1	160,158	161,801	1.03%	360	360	0.13%
2020	2	160,826	164,143	2.06%	364	365	0.26%
2021	3	161,497	166,519	3.11%	369	371	0.40%
2022	4	162,170	168,929	4.17%	374	376	0.53%
2023	5	162,847	171,374	5.24%	379	381	0.67%
2024	6	163,526	173,855	6.32%	384	387	0.80%
2025	7	164,208	176,371	7.41%	389	392	0.94%
2026	8	164,892	178,924	8.51%	394	398	1.08%
2027	9	165,580	181,514	9.62%	399	404	1.22%
2028	10	166,271	184,141	10.75%	404	410	1.36%
2029	11	166,964	186,806	11.88%	409	416	1.50%
2030	12	167,660	189,510	13.03%	415	422	1.64%
2031	13	168,360	192,253	14.19%	420	428	1.79%
2032	14	169,062	195,036	15.36%	426	434	1.94%
2033	15	169,767	197,859	16.55%	431	440	2.08%
2034	16	170,475	200,722	17.74%	437	447	2.23%
2035	17	171,186	203,628	18.95%	443	453	2.38%
2036	18	171,900	206,575	20.17%	448	460	2.53%
2037	19	172,617	209,565	21.40%	454	466	2.68%
2038	20	173,336	212,598	22.65%	460	473	2.84%
2039	21	174,059	215,675	23.91%	466	480	2.99%
2040	22	174,785	218,797	25.18%	472	487	3.15%
Average Annual Growth Rate (AAGR)							
2018-2038	N/A	0.42%	1.45%	N/A	1.31%	1.45%	N/A
2018-2040	N/A	0.42%	1.45%	N/A	1.31%	1.45%	N/A
2020-2040	N/A	0.42%	1.45%	N/A	1.31%	1.45%	N/A

Source: Michael Baker International, Inc., 2019.