Chapter 4 - Aviation Demand and Activity Forecasts

4.1. Introduction

Forecasting aviation activity demand is an important component of the aviation system planning process as it provides the Indiana Department of Transportation (INDOT) Office of Aviation with key insight into where future growth may occur and the level of growth that could realistically be expected at system airports over the 20-year planning horizon. Results of forecasting efforts can inform INDOT Office of Aviation where deficiencies may occur in the future if aviation activity demands outweigh existing facilities and services at a given ISASP airport. The base year that served as the foundation of the 2022 ISASP forecasts is 2019 considering the atypical activity levels in 2020 due to the global Coronavirus (COVID-19) pandemic. Forecasts are presented in five-year (2024), 10-year (2029), and 20-year (2039) horizons. The exception to this framework is for based aircraft projections, which rely on 2021 based aircraft data as the base year due to 2019 based aircraft data being unavailable from the National Inventory of Based Aircraft (basedaircraft.com). Forecast years for based aircraft align with the forecast years for other aviation activity and are 2024, 2029, and 2039.

Prior to presenting the 2022 Indiana State Aviation System Plan (ISASP) aviation activity demand forecasts, this chapter provides key contextual information related to industry and socioeconomic trends. This contextual information, as well as the process and results of the forecasting efforts, are presented in the following sections:

- 4.2 Industry Trends
- 4.3 Socioeconomic Trends
- 4.4 Activity Forecasts
- 4.5 2022 ISASP Forecasts Compared to the 2020 Federal Aviation Administration (FAA) Terminal Area Forecast (TAF)
- 4.6 Summary

4.2. Industry Trends

Forecasting aviation demand at a statewide level is a complex process that requires consideration of many factors. Prior to evaluating various forecasting methodologies, external factors such as COVID-19 and emerging technologies were reviewed to provide additional insight and context.

4.2.1. COVID-19

The COVID-19 pandemic caused a global health crisis in the early months of 2020 that continued into 2021, affecting the United States (U.S.) in every way imaginable. Impacts of COVID-19, such as lockdowns, stay-at-home orders, business closures, and other restrictions had drastically negative effects across all sectors of the global economy, including aviation and air travel. Impacts of COVID-19 on the aviation industry were somewhat unique compared to other crises that previously impacted the aviation industry, including 9/11 and the Great Recession, because both aviation demand and supply were affected due to passenger health safety concerns and the suspension and restriction of flights. Both commercial service and general aviation (GA) airports experienced declines initially as airlines made significant personnel cuts and grounded entire fleets, while nearly all aspects of corporate travel were suspended for a period of time and many businesses were closed due to lockdowns and stay-at-home orders.

To provide aid to the industry, the Federal government passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act in March 2020 that set aside $25 million for U.S. passenger airlines on the condition that they maintained minimum service levels and kept workers on payroll through September 2020. The payroll relief program implemented under the CARES Act was extended under the Coronavirus Response and Relief Supplemental Appropriation Act (CRRSAA) in December 2020, and a third recovery bill, the American Rescue Plan Act of 2021 (ARPA) was passed in March 2021 that provides $14 billion in relief funding for eligible airports.

At the time of writing this chapter (November 2021), more COVID-19 cases continue to be reported, with more than 70,000 new cases reported daily (based on a weekly average) in the U.S. While 70,000 new cases per day may seem staggering, it is a significant decrease compared to the daily cases reported in mid-September that peaked at over 175,000.[1] With widespread vaccine dissemination and warmer weather during summer 2021, COVID-19 trends were on the decline, which allowed the aviation industry to experience some rebound in activity; however, national commercial service aviation activity levels were still below pre-pandemic levels. According to reports published by Airlines for America (A4A), in late October/early November 2021, U.S. airline passenger volumes were 14 percent below pre-pandemic levels, with domestic air passenger volumes down 11 percent and international air passenger volumes down 37 percent.[2] It is expected that fluctuations in COVID-19 infections, as well as continuing changes in the economy, including work from home and use of videoconferencing, will continue to influence consumer and business behaviors until rates of infection decrease, travel restrictions are completely lifted, and consumers begin to feel more comfortable returning to the skies. Industry analysts are unsure when business travel will return to the pre-COVID-19 levels based on greater acceptance of videoconferencing.

GA airports experienced different levels of COVID-19-related impacts. Initially, there was a tremendous decline in GA activity, particularly as it related to corporate aviation; however, over time, GA experienced a more rapid recovery compared to commercial service activity. This quicker recovery is due in part to some business travelers and high-income travelers opting to utilize GA instead of commercial service. Other activity aiding in the recovery includes GA flight training (which quickly rebounded) and recreational use of GA by many who enjoyed the freedom during periods of time when many social activities and events were cancelled and some businesses were closed, allowing more time to enjoy personal aviation.

As the dynamic and unprecedented events of the COVID-19 pandemic continue to unfold, it is difficult to determine when airline travel and the aviation industry will return to pre-pandemic levels. In early November 2021, A4A reported that a recovery scenario may occur where airline revenues recover to pre-pandemic levels by the second half of 2022.[3] Considering that airline revenue is expected to return to pre-COVID levels by mid-2022 and U.S. passenger volumes are only 14 percent below pre-pandemic levels currently, it is evident that aviation recovery is projected to occur much sooner than early-COVID-19 pandemic reports may have indicated, which stated the airline industry may not recover until well into 2024. Considering the more rapid recovery projections for aviation activity in the U.S., and in consultation with the FAA, 2019 was chosen as the base year for forecasting activity since, since using 2020 as the base year may incorrectly project aviation demand much lower than what is expected to occur.

[1] https://www.nytimes.com/interactive/2021/us/covid-cases.html
[2] https://www.airlines.org/dataset/impact-of-covid19-data-updates/
[3] https://www.airlines.org/dataset/impact-of-covid19-data-updates/

The following section details activity recovery seen at Indiana airports through the end of calendar year 2021.

4.2.1.1. COVID-19 Aviation Industry Recovery in Indiana

The COVID-19 airline recovery projections presented earlier in this chapter from A4A were developed to reflect anticipated national trends and appear to generally be in line with the airline activity occurring within Indiana. Recent data from towered airports within Indiana's aviation system presents an optimistic recovery perspective. As shown in **Table 4.1**, total operations at the four Primary airports in the state serving commercial airlines were within one percent of 2019 levels as of the end of 2021 with further recovery expected into 2022. At the same time, activity at GA airports across almost all facility categories grew six percent from 2019 to 2021. When looking at total operations at both Primary and GA airports, nine of the 10 towered airports in the state experienced an increase of operations in 2021 compared to 2020, and five airports experienced only a minor decrease in operations from 2019 to 2021. In total, these airports saw a three percent increase in total operations from 2019 to 2021. While activity data for 2021 was not available for all system facilities, the data from towered airports was available for three of the five facility categories in Indiana's airport system.

Table 4.1. COVID-19 Recovery of Operations at Indiana's Towered Airports

Associated City	Airport Name	FAA ID	2019 Operations	2020 Operations	2021 Operations	2020-2021 % Change	2019-2021 % Change
Primary							
Evansville	Evansville Regional	EVV	37,084	29,539	34,980	18%	-6%
Fort Wayne	Fort Wayne International	FWA	39,266	35,562	40,800	15%	4%
Indianapolis	Indianapolis International	IND	187,489	144,241	186,190	29%	-1%
South Bend	South Bend International	SBN	46,174	32,888	44,772	36%	-3%
Total Operations at Towered Primary Facilities			**310,013**	**242,230**	**306,742**	**27%**	**-1%**
National							
Gary	Gary/Chicago International	GYY	20,837	18,635	21,487	15%	3%
Regional							
Bloomington	Monroe County	BMG	29,919	21,582	29,376	36%	-2%
Columbus	Columbus Municipal	BAK	50,699	43,370	49,122	13%	-3%
Lafayette	Purdue University	LAF	117,727	104,897	127,650	22%	8%
Muncie	Delaware County	MIE	30,603	32,816	32,326	-1%	6%
Terre Haute	Terre Haute Regional	HUF	61,291	43,737	70,871	62%	16%
Total Operations at Towered GA Airports			**311,076**	**265,037**	**330,832**	**25%**	**6%**
Total Operations at all Towered Airports			**621,089**	**507,267**	**637,574**	**26%**	**3%**

Note: Green percentages indicate an increase of operations and red percentages indicates a decrease. Source: FAA's Air Traffic Activity System (ATADS), 2019-2021; Kimley-Horn, 2022

4.2.2. Emerging Technologies

While concerns about COVID-19 impacts on the aviation industry continue, there are considerable emerging technology milestones being made that could propel the aviation industry into a new era of opportunities.

These emerging technologies, such as advanced air mobility (AAM), autonomous ground vehicles, and sustainable aviation fuels (SAF), all have the potential to influence transportation in the future. AAM is a comprehensive term that encompasses multiple emerging aviation technologies, including unmanned aircraft systems (UAS), as well as electric and hybrid aircraft, which includes electrical vertical takeoff and landing (eVTOL) aircraft. The different components of AAM and the impact of autonomous ground vehicles and SAF are discussed in more detail in the following subsections. While these technologies are still emerging, and therefore their total impacts are unknown, it is important to provide further information on their potential impacts on Indiana aviation demand and facility needs in the future.

4.2.2.1. Unmanned Aircraft Systems (UAS)

UAS technology is already widely used across a variety of industry sectors and is used for recreational, commercial, and military purposes. Many industries can benefit from the use of UAS due to the workflow efficiencies and increases in safety standards that this technology provides. Currently, UAS are commonly used for surveying; search and rescue; construction management; and inspecting aircraft, airfields, powerlines, wildlife populations, and more. As UAS capabilities increase and collision-avoidance technology advances, so too will the range of tasks UAS can perform, and the opportunities to invest in UAS will continue to grow. It is important to note that UAS come in a variety of sizes, ranging from weighing less than 20 pounds to weighing over 1,000 pounds, and the size of the aircraft has different implications for on-airport impacts. UAS that weigh less than 55 pounds fall under the FAA's Part 107 Small UAS regulation; this classification of UAS is common for commercial, government, and personal use. Small UAS can operate without air traffic control (ATC) permission in Class G airspace, but prior ATC authorization is required for operations in Class B, C, D, and E airspace. While small UAS will have no impact on forecasting or facility planning at Indiana airports, any type of UAS activity can impact the airspace that aircraft operate within. Programs like the Low Altitude Authorization and Notification Capability (LAANC) and the FAA's Drone Zone have been developed for small UAS users to efficiently receive authorization from ATC to operate in restricted airspace. Small UAS fly at low altitudes, typically lower than 3,500 feet. Larger UAS, particularly those over 1,000 pounds, can operate at altitudes of 18,000 feet and higher. While the use of small UAS is prolific, the use of larger UAS for the transportation of goods, and eventually passengers via autonomous eVTOL technology, has just started to be realized. These UAS have the potential to impact airports as they may require the use of airport facilities to operate or congest nearby airspace.

4.2.2.2. Autonomous Ground Vehicles

The proliferation of autonomous ground vehicles may change people's travel behaviors within their own communities and across longer distances, which could in turn have an impact on aviation activity levels. Driverless cars could result in individuals opting out of flying to regional locations or opt to drive to commercial service airports that are further away that may have airfares or offer more appealing connections. This could impact an airline's route availability and airports could experience a decrease in parking revenue due to autonomous vehicle drop-offs and pick-ups. This could also mean airports may need to dedicate landside space to accommodate autonomous vehicle drop-offs and pick-ups and charging locations in passenger parking lots. Autonomous vehicles may also play a role in supporting airport operations such as baggage- and cargo-handling carts. Other ground transportation services, such as airport shuttles, may also become autonomous as this technology continues to proliferate.

4.2.2.3. Alternative Fuels and Electric Aircraft

The development and implementation of alternative fuels (including electrification) over the use of traditional fossil fuels is a major focal point amongst the aviation industry to reduce aircraft emissions and promote sustainability.

However, the challenge associated with new fuel technologies, such as SAF, hydrogen, and electric aircraft, is developing airport infrastructure that can accommodate these new fuels. While SAF allows for reduced reliance on Jet A fuel for turbine aircraft, most GA aircraft (piston-powered) still operate on 100 low-lead (100LL) fuel which, as the name suggests, contains lead. It is the only remaining lead-containing transportation fuel in use in the U.S. As such, there is increasing pressure to develop a replacement fuel that piston aircraft can operate safely on. As recently as July 2021, the FAA approved the first-ever unleaded fuel for GA aircraft. The fuel is referred to as G100UL and is a high-octane unleaded aviation fuel. G100UL is a drop-in fuel, which means a separate distribution network will not have to be developed; existing 100LL equipment can remain in operation, and a pilot can top off their tank that already has 100LL in it with G100UL with no issues.[4] As advancements continue in this area and sustainable fuel and electric aircraft become more commonplace, airports will need to plan for demand by offering aircraft charging stations, alternative fuel pumps for aircraft, and upgrading other utilities or airport infrastructure to accommodate these changes. Preparation for these advancing technologies is already occurring, with some eVTOL and electric aerospace companies approaching airports across the country (including in Indiana) about installing aircraft charging stations now.

4.3. Socioeconomic Trends

Socioeconomic indicators can be used in the forecasting process to relate future activity levels at airports to the local, regional, and/or statewide trends. This section analyzed historic and forecasted population, employment, and per capita personal income (PCPI) trends in Indiana to understand how socioeconomic conditions in the state could relate to 2022 ISASP future aviation demand. The data used for the socioeconomic trend analysis was obtained from Woods & Poole Economics, Inc. (Woods & Poole), an independent firm that specializes in long-term economic and demographic data projections and is an industry-recognized source commonly used in socioeconomic analyses.[5]

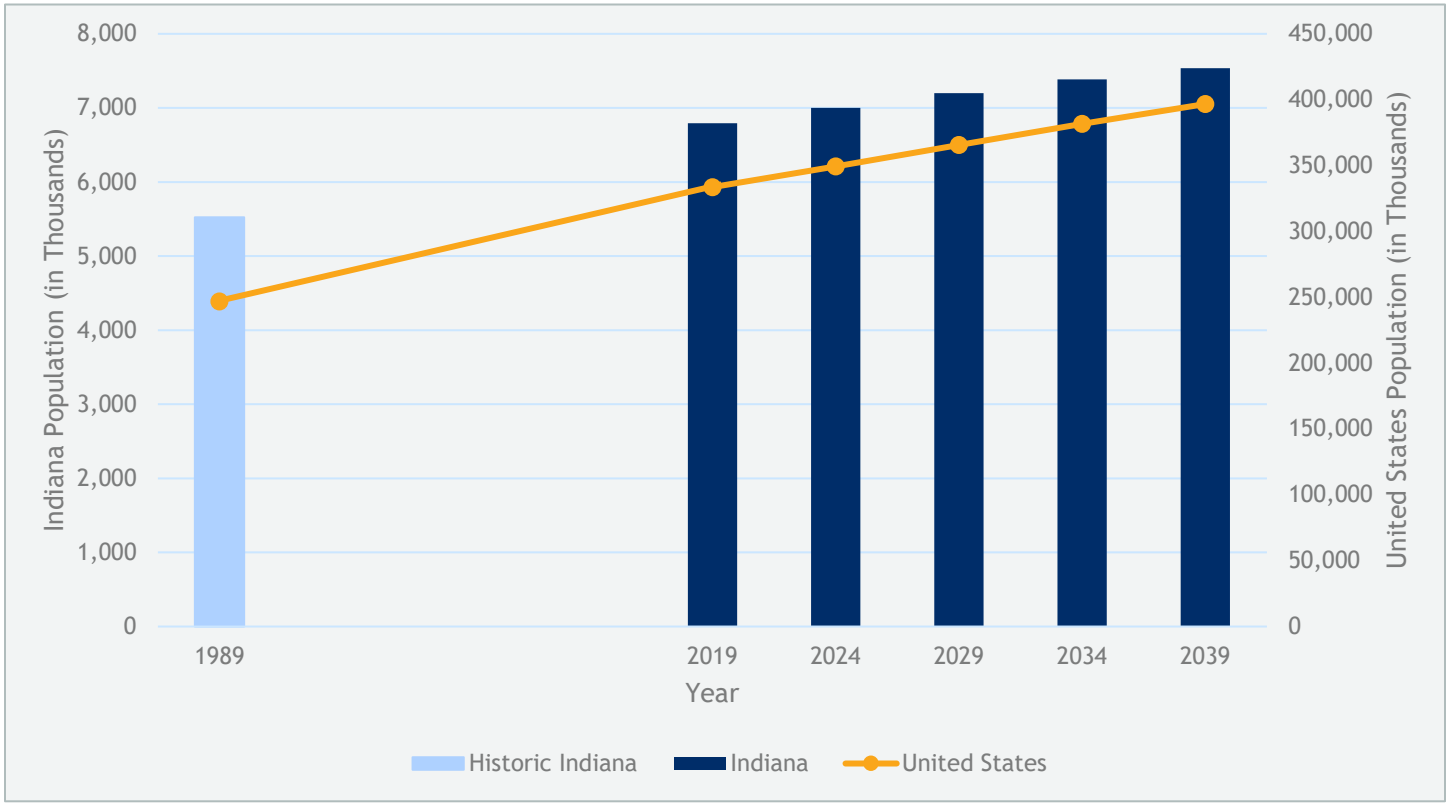
4.3.1. Population

Figure 4.1 presents the historic and projected population of the U.S. and the State of Indiana between 1989 and 2039. Indiana's population increased in a linear fashion between 1989 and 2019 at a compound annual growth rate (CAGR) of 0.7 percent, which is slightly less than the growth of the U.S. population at a rate of 1.0 percent over the same 20-year period. Indiana's population is projected to grow at a CAGR of 0.5 percent through 2039, which is less than the anticipated growth of the U.S. population which is anticipated to grow at a rate of 0.9 percent annually over the same period. Indiana's population is anticipated to reach approximately 7.5 million people by 2039, which is an additional two million people over the next 20 years.

[4] https://www.greencarcongress.com/2021/07/20210728-g100ul.html

[5] Woods & Poole data includes projections for all data points from 2015 to 2050, therefore, the Woods & Poole data presented does not account for COVID-19 impacts.

Figure 4.1. Population Growth Trends for Indiana and United States, 1989-2039 (in Thousands)



Sources: Woods & Poole, 2021; Kimley-Horn, 2021.

Table 4.2 presents the population trends for each of Indiana's counties. With over 950,000 people in 2019, Marion County—the location of the state's capital, Indianapolis—has the largest population of all of Indiana's counties. Marion County's population is anticipated to grow at a rate of 0.3 percent between 2019 and 2039 with a projected population growth of slightly more than one million people by 2039. While Marion County is, and is forecasted to be, the most populated county in the state, Boone County and Hamilton County are anticipated to experience the highest percentage of population growth between 2019 and 2039, with a CAGR of 2.0 percent. Over the 20-year forecast period, 11 of Indiana's 92 counties are projected to have an equal or higher growth rate than the U.S. average. There are 15 counties that are anticipated to show negative growth over the forecast period. As a note, county-level population trend data was evaluated to produce a CAGR by county that was used in a methodology to forecast based aircraft. Employment and PCPI trends are not presented by county in this chapter since neither were selected as a methodology to associate aviation demand within Indiana; however, an assessment of employment and PCPI trends at the statewide level are included in the following subsections for reference.

Table 4.2. Population Growth Trends at the County, State, and National Level, 1989-2039 (in Thousands)

County	Historic	Base	Projected			CAGR			
	1989	2019	2024	2029	2039	1989-2019	2019-2024	2019-2029	2019-2039
Adams	31	36	37	38	39	0.5%	0.6%	0.5%	0.5%
Allen	301	376	387	397	414	0.7%	0.6%	0.5%	0.5%
Bartholomew	63	82	83	85	86	0.9%	0.4%	0.4%	0.3%
Benton	9	9	8	8	8	-0.3%	-0.3%	-0.3%	-0.4%
Blackford	14	12	12	12	12	-0.5%	-0.2%	-0.2%	-0.2%
Boone	38	69	76	84	102	2.0%	2.1%	2.1%	2.0%
Brown	14	16	17	18	19	0.4%	1.0%	1.1%	0.9%
Carroll	19	20	21	21	21	0.3%	0.4%	0.4%	0.3%
Cass	39	39	39	39	38	0.0%	0.1%	0.0%	-0.1%
Clark	88	119	124	129	138	1.0%	0.8%	0.8%	0.7%
Clay	25	27	27	28	28	0.3%	0.3%	0.2%	0.1%
Clinton	31	33	34	34	34	0.2%	0.2%	0.2%	0.1%
Crawford	10	11	11	12	12	0.4%	0.7%	0.7%	0.6%
Daviess	28	34	34	35	37	0.6%	0.5%	0.5%	0.4%
Dearborn	38	52	55	58	63	1.1%	1.1%	1.0%	1.0%
Decatur	24	27	28	28	29	0.4%	0.4%	0.4%	0.3%
De Kalb	35	44	45	46	48	0.7%	0.6%	0.5%	0.5%
Delaware	120	117	117	116	114	-0.1%	0.0%	0.0%	-0.1%
DuBois	37	43	45	46	47	0.6%	0.5%	0.5%	0.4%
Elkhart	156	208	214	221	231	1.0%	0.6%	0.6%	0.5%
Fayette	26	24	24	24	23	-0.4%	0.1%	0.0%	0.0%
Floyd	63	80	83	87	93	0.8%	0.9%	0.9%	0.8%
Fountain	18	17	17	17	16	-0.2%	0.0%	-0.1%	-0.1%
Franklin	20	24	24	25	26	0.6%	0.6%	0.5%	0.5%
Fulton	19	21	21	21	21	0.3%	0.2%	0.2%	0.1%
Gibson	32	34	35	36	36	0.2%	0.6%	0.4%	0.2%
Grant	74	68	68	68	66	-0.3%	-0.1%	-0.1%	-0.2%
Greene	30	34	35	36	37	0.4%	0.6%	0.5%	0.5%
Hamilton	105	336	372	411	495	4.0%	2.1%	2.1%	2.0%
Hancock	45	77	83	88	99	1.8%	1.4%	1.4%	1.3%
Harrison	30	41	44	46	51	1.1%	1.1%	1.1%	1.0%
Hendricks	75	170	185	201	234	2.8%	1.7%	1.7%	1.6%
Henry	48	49	50	50	49	0.1%	0.1%	0.1%	0.0%
Howard	81	83	84	84	83	0.1%	0.1%	0.1%	0.0%
Huntington	35	37	38	38	38	0.1%	0.2%	0.2%	0.1%

County	Historic	Base	Projected			CAGR			
	1989	2019	2024	2029	2039	1989-2019	2019-2024	2019-2029	2019-2039
Jackson	37	45	45	46	47	0.6%	0.4%	0.3%	0.3%
Jasper	25	35	36	37	38	1.1%	0.6%	0.6%	0.5%
Jay	22	21	21	21	21	-0.1%	0.0%	0.0%	-0.1%
Jefferson	30	33	34	35	37	0.4%	0.6%	0.6%	0.5%
Jennings	24	29	29	30	30	0.6%	0.4%	0.4%	0.3%
Johnson	87	162	177	194	228	2.1%	1.8%	1.8%	1.7%
Knox	40	38	38	38	37	-0.2%	0.0%	-0.1%	-0.1%
Kosciusko	65	81	84	86	90	0.7%	0.6%	0.6%	0.6%
LaGrange	29	40	41	42	44	1.0%	0.6%	0.5%	0.5%
Lake	474	496	501	506	507	0.1%	0.2%	0.2%	0.1%
La Porte	107	113	114	114	114	0.2%	0.2%	0.2%	0.1%
Lawrence	43	47	47	48	49	0.3%	0.4%	0.4%	0.3%
Madison	130	131	131	131	129	0.0%	0.1%	0.0%	-0.1%
Marion	793	952	970	985	1002	0.6%	0.4%	0.3%	0.3%
Marshall	42	48	49	50	52	0.4%	0.4%	0.4%	0.4%
Martin	10	10	10	10	10	-0.1%	0.0%	0.0%	-0.1%
Miami	37	36	36	36	35	-0.1%	0.0%	0.0%	-0.1%
Monroe	108	149	155	160	170	1.1%	0.8%	0.7%	0.7%
Montgomery	35	39	39	39	39	0.4%	0.2%	0.2%	0.1%
Morgan	55	72	74	76	79	0.9%	0.6%	0.6%	0.5%
Newton	31	36	37	38	39	0.2%	0.3%	0.3%	0.2%
Noble	38	48	49	50	51	0.8%	0.3%	0.3%	0.3%
Ohio	5	6	6	7	7	0.6%	0.7%	0.7%	0.6%
Orange	18	20	20	21	21	0.3%	0.4%	0.4%	0.3%
Owen	17	22	22	23	23	0.8%	0.5%	0.5%	0.4%
Parke	15	18	18	18	19	0.4%	0.4%	0.4%	0.3%
Perry	19	20	20	20	20	0.1%	0.2%	0.1%	0.1%
Pike	13	13	13	13	13	0.0%	0.1%	0.1%	0.0%
Porter	127	178	189	201	224	1.1%	1.3%	1.2%	1.1%
Posey	26	26	27	27	28	0.0%	0.4%	0.4%	0.3%
Pulaski	13	13	13	13	13	0.1%	0.1%	0.1%	0.1%
Putnam	30	38	39	40	41	0.8%	0.4%	0.4%	0.3%
Randolph	27	25	25	25	24	-0.3%	-0.1%	-0.1%	-0.2%
Ripley	24	29	30	30	30	0.6%	0.3%	0.3%	0.2%
Rush	18	17	17	16	16	-0.3%	-0.2%	-0.2%	-0.3%
St. Joseph	246	271	275	278	281	0.3%	0.3%	0.2%	0.2%

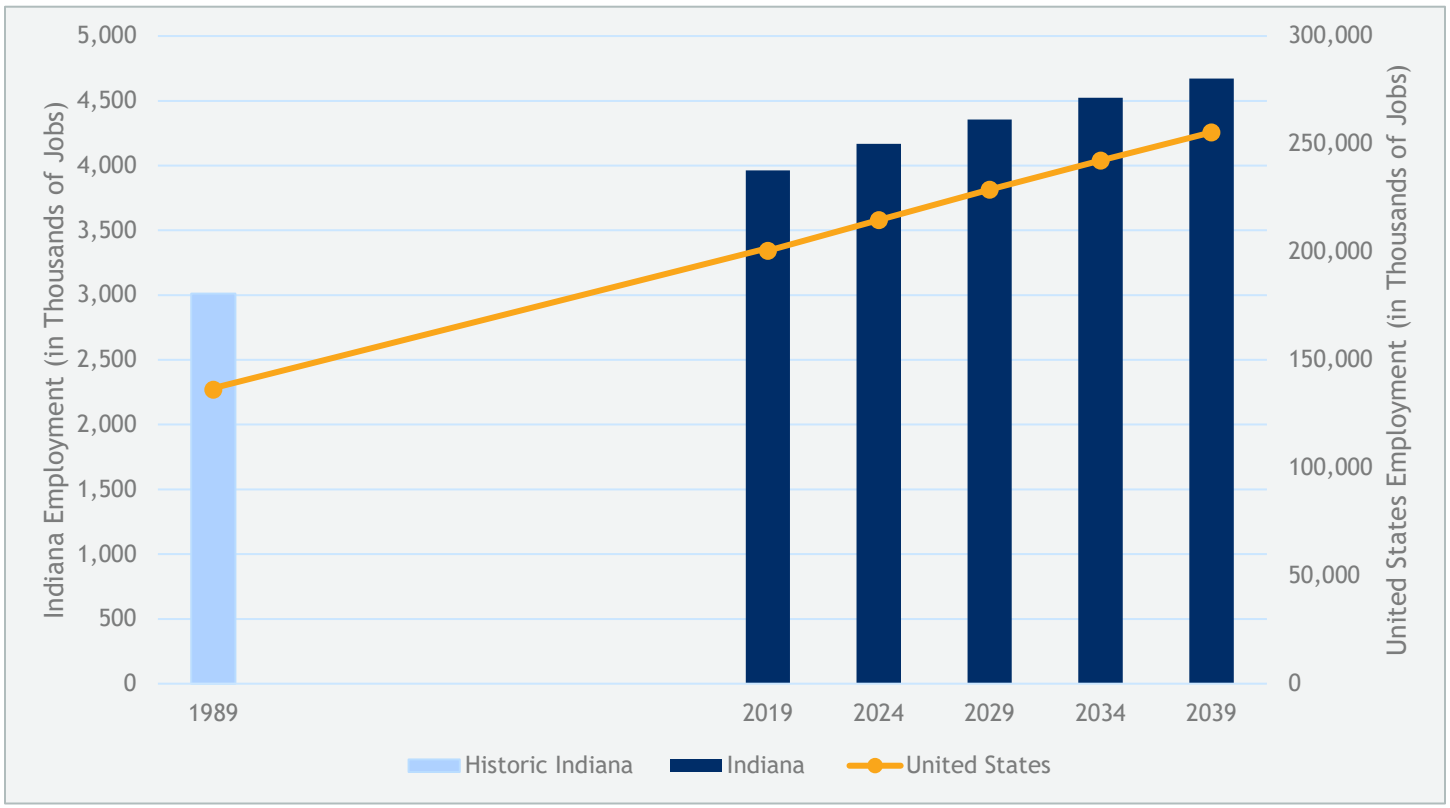
County	Historic	Base	Projected			CAGR			
	1989	2019	2024	2029	2039	1989-2019	2019-2024	2019-2029	2019-2039
Scott	21	25	26	27	29	0.6%	0.9%	0.9%	0.8%
Shelby	40	46	47	47	49	0.4%	0.4%	0.4%	0.3%
Spencer	19	21	21	22	22	0.3%	0.3%	0.3%	0.2%
Starke	22	24	24	25	25	0.2%	0.5%	0.4%	0.4%
Steuben	27	36	37	39	42	0.9%	0.8%	0.9%	0.8%
Sullivan	19	21	21	22	21	0.4%	0.2%	0.1%	0.1%
Switzerland	8	11	12	12	13	1.2%	1.1%	1.0%	0.9%
Tippecanoe	131	190	197	203	214	1.3%	0.7%	0.7%	0.6%
Tipton	16	15	15	15	15	-0.1%	0.0%	0.0%	-0.1%
Union	7	7	7	7	7	0.2%	0.2%	0.2%	0.1%
Vanderburgh	165	185	187	190	192	0.4%	0.3%	0.3%	0.2%
Vermillion	17	16	16	16	16	-0.2%	0.2%	0.2%	0.1%
Vigo	107	109	110	110	109	0.1%	0.1%	0.1%	0.0%
Wabash	35	32	32	32	32	-0.3%	0.0%	0.0%	0.0%
Warren	8	8	8	9	8	0.1%	0.1%	0.1%	0.0%
Warrick	45	65	69	74	83	1.2%	1.3%	1.3%	1.2%
Washington	24	29	30	31	33	0.7%	0.7%	0.7%	0.6%
Wayne	72	67	67	66	64	-0.2%	-0.1%	-0.2%	-0.3%
Wells	26	28	29	29	29	0.3%	0.3%	0.2%	0.2%
White	23	25	25	25	25	0.2%	0.2%	0.2%	0.1%
Whitley	27	34	35	36	37	0.7%	0.4%	0.4%	0.4%
Indiana	**5,524**	**6,794**	**6,999**	**7,201**	**7,538**	**0.7%**	**0.6%**	**0.6%**	**0.5%**
United States	**246,820**	**333,598**	**349,344**	**365,568**	**396,688**	**1.0%**	**0.9%**	**0.9%**	**0.9%**

Sources: Woods & Poole, 2021; Kimley-Horn, 2021.

4.3.2. Employment

Figure 4.2 presents the historic and projected number of employed people in the U.S. and the State of Indiana between 1989 and 2039. The number of employed people in Indiana increased consistently between 1989 and 2019 at a CAGR of 0.9 percent, which is slightly less than the growth of employed people in the U.S., which grew at a rate of 1.3 percent over the same 20-year period. The number of employed people in Indiana is projected to grow at a rate of 0.8 percent annually over the 20-year planning horizon from 2019-2039, which is slightly less than the anticipated growth of the number of employed people in the U.S. over the same period, which is anticipated to grow at a rate of 1.2 percent annually. The number of employed people in Indiana is anticipated to reach approximately 4.7 million people by 2039, which is an increase of more than 1.6 million employed people in 20 years.

Figure 4.2. Employment Trends for Indiana and United States, 1989-2039 (in Thousands of Jobs)

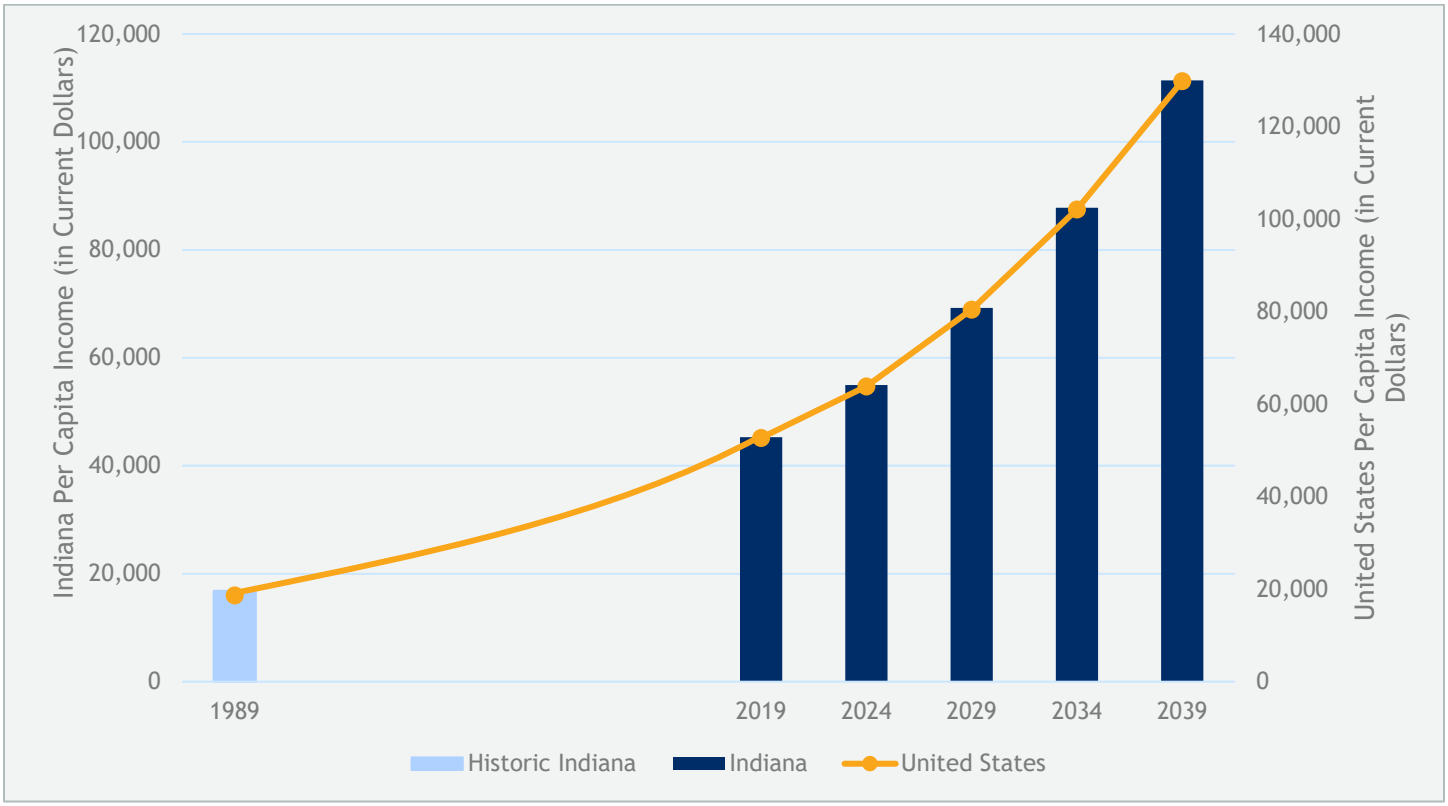


Sources: Woods & Poole, 2021; Kimley-Horn, 2021.

4.3.3. Income

Figure 4.3 presents the historic and projected PCPI of the U.S. and the State of Indiana between 1989 and 2039. Indiana's PCPI increased steadily between 1989 and 2019 at a CAGR of 3.4 percent, which is equal to the growth for U.S. PCPI over the same period. Indiana's PCPI is projected to grow at a rate of 4.6 percent annually over the 20-year planning horizon from 2019-2039, which is also equal to the growth anticipated for U.S. PCPI over the same period. Indiana's PCPI is anticipated to reach approximately $111,400 in current dollars by 2039, which is an increase of slightly more than $40,000 over 20 years.

Figure 4.3. PCPI Trends for Indiana and United States, 1989-2039 (in Current Dollars)



Sources: Woods & Poole, 2021; Kimley-Horn, 2021.

4.4. Activity Forecasts

Five airport activities were included in the 2022 ISASP demand forecasts: based aircraft, GA operations, commercial service operations, military operations, and enplanements. Developing reliable and accurate forecasts was dependent upon two factors: accurate baseline data, which is the foundation from which to forecast, and implementing multiple methodologies to verify the authenticity of the forecast results. The following subsections outline the base data and multiple methodologies developed for each forecasted activity indicator. Forecasts developed for the 2022 ISASP are based on the existing conditions of the airport during the time the base year data was collected. Upcoming expansion projects that may impact an airport's activity levels, such as a runway extensions or additional hangars, were not factored into the analyses presented in **Sections 4.4.1 - 4.4.5.** It is important to note that 2020 was not selected as the base year for any forecasted activity, upon consultation with direction from the FAA, due to the atypical nature of aviation activity during the initial phases of the COVID-19 pandemic, which included lockdowns, stay-at-home orders, and other travel restrictions. To provide additional context, activity data recorded in 2020 for each forecasted activity is included in the following subsections. Activity forecasts were developed from base year 2019 for operations and enplanements and 2021 for based aircraft, with projections for 2024, 2029, and 2039.

4.4.1. Based Aircraft Forecasts

Projections of based aircraft demand are used to better understand future needs related to covered aircraft storage, apron space and tie-downs, and other airfield facilities that support based aircraft. Baseline based aircraft counts were sourced from the FAA's National Based Aircraft Inventory Program (basedaircraft.com). These data were selected over airport-reported or other online sources of based aircraft as these are the counts used by the FAA to determine National Plan of Integrated Airport Systems (NPIAS) eligibility, allocate appropriate federal funding, and determine system-wide improvement needs. The 2022 ISASP Airport Manager Survey data was used only as the source of based aircraft counts at the four facilities that are not included in the NPIAS as these airports do not report to the FAA's National Based Aircraft Inventory Program. As previously noted, 2021 was used as the base year for based aircraft counts. This base year differs from the 2019 base year used for operations and enplanements since it was the most current and accurate data source for these counts at the time the forecasts were developed. Moreover, while historic based aircraft data is available at the airport level on basedaircraft.com the historic reports do not present the data by aircraft type, which is critical for conducting the Based Aircraft Fleet Mix Methodology that is presented in **Section 4.4.1.3.** Airport and heliport managers were given advanced notice of the forecasting efforts and were encouraged to log into their basedaircraft.com accounts and update their based aircraft data prior to development of any projections in mid-2021.[6] The following presents the three methodologies analyzed to forecast based aircraft demand over the 20-year planning horizon.

To provide additional historical context on how based aircraft counts have changed over the last 10+ years, historical based aircraft counts were sourced from Indiana's state aircraft registration records and included in **Figure 4.4** at the state level (for years 2009 and 2014) and in **Table 4.11**, included at the end of this chapter, at the individual airport level (for years 2009-2019). It is important to note that this source of historic based aircraft data differs from the national aircraft registry verified and maintained by the FAA. As such, the counts provided by each source differ.

4.4.1.1. Option #1: Population Methodology

The Population Methodology utilized Indiana's current and projected county level population growth as forecasted by Woods & Poole to determine a population-to-based aircraft ratio reflecting comparable growth patterns.[7] This method assumed that based aircraft at each airport will increase at the same rate population increases in the airport's associated county. The population methodology estimates that statewide based aircraft will increase from 2,848. While airports in metropolitan areas typically serve multiple counties with a larger catchment area, the county in which the airport is located was used to maintain consistency in application across all facilities in the ISASP. The results of this methodology are presented in comparison to the other methodologies for projecting based aircraft in **Figure 4.4** and **Table 4.3**.

4.4.1.2. Option #2: Applied FAA TAF CAGR Methodology

The Applied FAA TAF CAGR Methodology uses the CAGR of based aircraft counts at each ISASP facility based upon the 2020 FAA TAF for projected years 2021, 2024, and 2039 to align with the 2022 ISASP forecast years.

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[6] The based aircraft forecasts used 2021 as base year unlike the other forecasts documented in this chapter which used 2019.

[7] Please note that the population CAGR for 2021-2039 was used in this analysis to align with the base year of 2021 for projecting growth in based aircraft. These growth rates vary minimally from the growth rates presented for the 2019-2039 time period in **Section 4.3.1**.

The CAGRs that were calculated from these TAF based aircraft projections ranged from -0.5 percent to five percent. TAF projections assume a demand driven forecast for aviation services that takes into consideration both local and national economic conditions, as well as conditions within the aviation industry.[8] For locations without air traffic control towers, historic operations in the TAF are from the Form 5010 data. These operations levels are held constant for the forecast unless otherwise specified by a local or regional FAA official. The individual CAGR percentage was applied to the preferred baseline source for based aircraft counts for each ISASP facility, which was basedaircraft.com. It is important to note that this methodology does not produce the same forecasted aircraft counts as if they were taken directly from the 2020 FAA TAF since the CAGR is applied to the 2021 basedaircraft.com validated aircraft counts which differ from the 2021 based aircraft counts used in the 2020 FAA TAF. The TAF CAGR for the one NPIAS Unclassified airport was applied to the other four ISASP Unclassified airports that are not included in the TAF because the FAA does not produce a TAF for airports that are not included in the NPIAS. The 2021 basedaircraft.com counts show 2,848 based aircraft across the Indiana airport system and the 2020 FAA TAF shows 3,133 for the year 2021, a difference of 258 based aircraft. This methodology assumes that the 2020 FAA TAF projections are accurate and applies that projected CAGR for each facility to basedaircraft.com data. The Applied FAA TAF CAGR Methodology estimates that based aircraft in Indiana will increase from 2,848 in 2021 to 3,349 in 2039. Results of the Applied FAA TAF CAGR Methodology are presented in **Figure 4.4** and **Table 4.3**.

4.4.1.3. Option #3: Based Aircraft Fleet Mix Methodology

The Based Aircraft Fleet Mix Methodology evaluated each individual airport's based aircraft fleet mix in 2021 and applied a growth rate based on aircraft type. It is assumed that the most demanding aircraft represents the growth of the entire composition of the airports fleet. The following average annual growth rates were utilized to estimate future based aircraft and were based on the *FAA Aerospace Forecast, 2019-2039*:

- If only piston-powered single-engine aircraft were based at the airport in 2021, then a 0.0 percent average annual growth rate was applied.
- If any piston-powered multi-engine aircraft, but no jet or turboprop and no rotorcraft, were based at the airport in 2021, then a 0.5 percent average annual growth rate was applied.
- If any jet or turboprop aircraft were based at the airport in 2021, then a 1.0 percent average annual growth rate was applied.
- If any rotorcraft were based at the airport in 2021, then a 1.0 percent average annual growth rate was applied.

The growth rates noted above are based on national based aircraft trends as reported by the *2019-2039 FAA Aerospace Forecast* that evaluates growth rates related to the active GA and air taxi aircraft fleet, number of hours flown, active pilot licenses, fuel consumption, and operations. The growth rates reviewed across these different indicators generally predict that jet, turboprop, and rotorcraft activity will increase while piston-powered single-engine and piston-powered multi-engine aircraft activity will decrease. As shown in Table 28 of the *2019-2039 FAA Aerospace Forecast*, the growth of piston-powered aircraft ranged from -1.0 percent to -0.4 percent, jet and turboprop aircraft had a growth rate of 1.8 percent, and rotorcraft had a growth rate of 1.7 percent.

[8] FAA, Forecast Process for 2020 TAF. https://taf.faa.gov/Downloads/ForecastProcessfor2020TAF.pdf

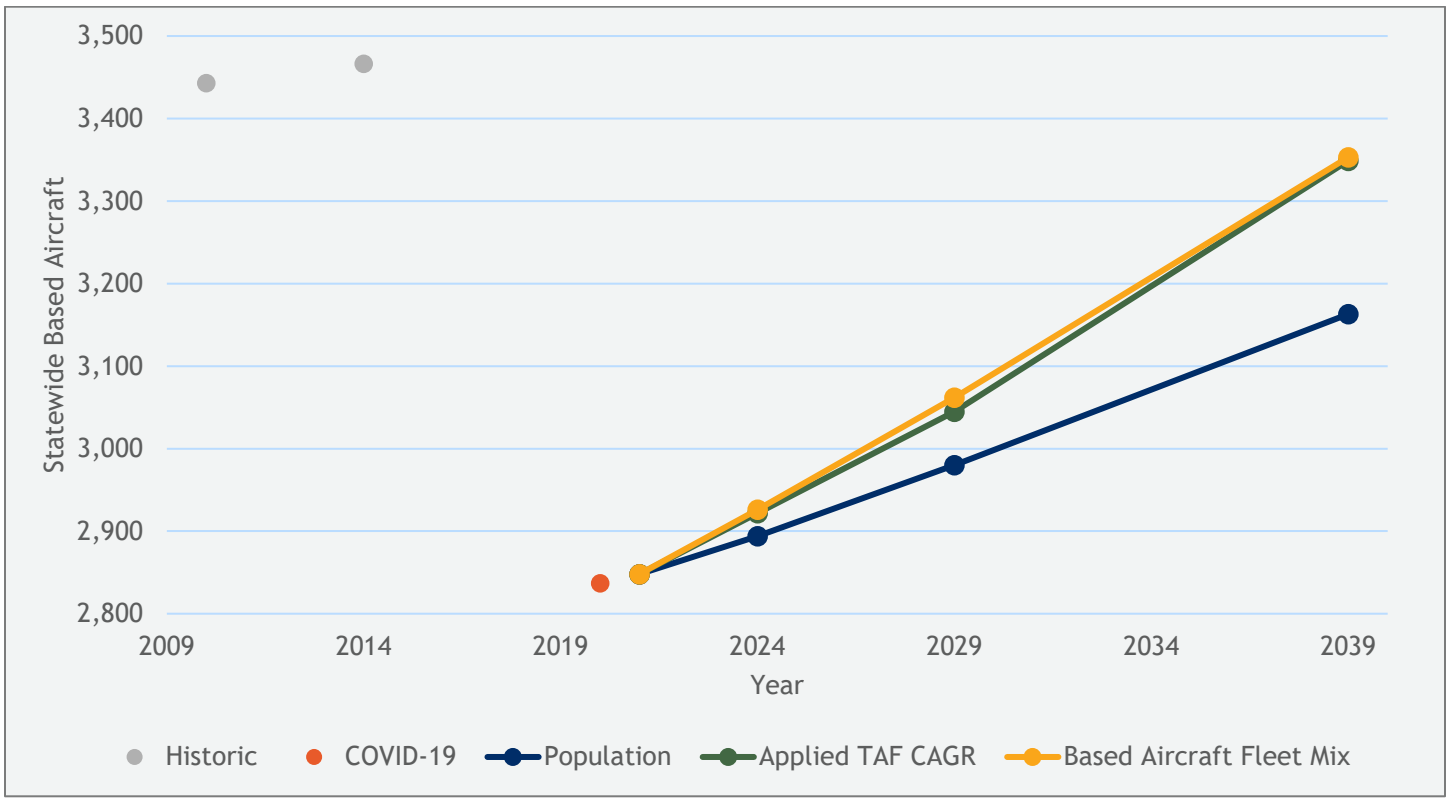
While it is understood these growth rates represent an estimate of based aircraft trends at the national level, it was important to consider other growth factors and input from INDOT Office of Aviation and airport operators. INDOT Office of Aviation noted that piston aircraft activity continues to occur rather frequently at system facilities, particularly for recreational flying and flight instruction, and many facilities reported a need for T-hangar storage or T-hangar waitlists, which would typically store single piston aircraft. For these reasons, the growth rates for single-engine and multi-engine aircraft were flatlined, as it is expected these aircraft will not decrease in Indiana at the same rate as the national estimates. Moreover, in order to draw modest estimates that do not over inflate projected aviation demand, the growth rates for jet, turboprop, and rotorcraft were reduced down to 1.0 percent. These adjusted growth rates provide a reasonable and conservative estimate of based aircraft forecasts in Indiana across all aircraft types over the 20-year planning period. It is important to note that the *2021-2041 FAA Aerospace Forecast* that was published in 2020 was available at the time of this report, however, the 2019-2039 report was selected as 2020 was considered an outlier year for aviation activity and the *2019-2039 FAA Aerospace Forecast* was more in line with the activity rebounding across Indiana's aviation system at the time of the analysis (2021). If the *2021-2041 FAA Aerospace Forecast* was used it would show a dramatic decrease in initial years of the activity forecasts based on the dramatic decline in activity in 2020, and over the long term reflect lower aviation activity levels than may be expected, considering the recovery seen in 2021-2022. The Based Aircraft Fleet Mix Methodology estimates that based aircraft at all Indiana airports will increase from 2,848 in 2021 to 3,353 in 2039, a CAGR of 0.86 percent. The results of this methodology are presented in **Figure 4.4** and **Table 4.3**.

4.4.1.4. Preferred Based Aircraft Forecast Methodology

Figure 4.4 and **Table 4.3** summarize based aircraft projections in Indiana from 2021 to 2039. Also included in **Figure 4.4** is the based aircraft data for 2020 which indicate that based aircraft were relatively unaffected by the pandemic.

Three different methodologies were evaluated to forecast statewide based aircraft from 2021 to 2039 (Population, Applied FAA TAF CAGR, and Based Aircraft Fleet Mix). Ultimately, the **Based Aircraft Fleet Mix Methodology** was selected as the preferred methodology because it takes a more nuanced approach to forecasting Indiana's based aircraft, using growth specific to the type of aircraft based at Indiana facilities. The Based Aircraft Fleet Mix Methodology results in a projected increase of 505 total based aircraft statewide over the 20-year planning horizon, a CAGR of 0.86 percent.

Figure 4.4. Historic Based Aircraft and 2021-2039 Forecasts



Sources: Basedaircraft.com, 2021; INDOT Office of Aviation State Based Aircraft Registration, 2009-2014; 2022 ISASP Airport Manager Survey, 2021; FAA Form 5010, 2021; 2020 FAA TAF; FAA Aerospace Forecast, 2019-2039; Woods & Poole, 2021; Kimley-Horn, 2021.

Table 4.3. Based Aircraft Forecasts, 2021-2039

Facility Information			Base Year	Population Methodology					Applied FAA TAF CAGR Methodology				Based Aircraft Fleet Mix Methodology			
Associated City	Facility Name	FAA ID	2021	County	2024	2029	2039	CAGR	2024	2029	2039	CAGR	2024	2029	2039	CAGR
Commercial Service																
Evansville	Evansville Regional	EVV	53	Vanderburgh	53	53	53	0.2%	59	70	98	3.5%	55	57	63	1.0%
Fort Wayne	Fort Wayne International	FWA	45	Allen	45	45	45	0.5%	46	46	48	0.4%	46	49	54	1.0%
Indianapolis	Indianapolis International	IND	88	Marion	88	88	88	0.2%	87	85	80	-0.5%	91	95	105	1.0%
South Bend	South Bend International	SBN	60	St. Joseph	60	60	60	0.2%	63	68	80	1.6%	62	65	72	1.0%
GA																
Anderson	Anderson Municipal-Darlington Field	AID	92	Madison	92	92	92	-0.1%	94	98	107	0.9%	95	100	110	1.0%
Angola	Tri-State Steuben County	ANQ	31	Steuben	31	31	31	0.7%	31	31	31	0.0%	31	32	34	0.5%
Auburn	DeKalb County	GWB	59	De Kalb	59	59	59	0.5%	59	59	59	0.0%	61	64	71	1.0%
Bedford	Virgil I Grissom Municipal	BFR	22	Lawrence	22	22	22	0.2%	22	22	22	0.0%	23	24	26	1.0%
Bloomington	Monroe County	BMG	84	Monroe	84	84	84	0.6%	86	90	99	0.9%	87	91	100	1.0%
Brazil	Brazil Clay County*	0I2	24	Clay	24	24	24	0.1%	24	24	25	0.2%	25	26	29	1.0%
Columbus	Columbus Municipal	BAK	70	Bartholomew	70	70	70	0.2%	73	77	88	1.3%	72	76	84	1.0%
Connersville	Mettel Field	CEV	9	Fayette	9	9	9	-0.1%	9	9	9	0.0%	9	9	9	0.0%
Crawfordsville	Crawfordsville Regional	CFJ	19	Montgomery	19	19	19	0.1%	19	19	19	0.0%	19	20	21	0.5%
Delphi	Delphi Municipal	1I9	27	Carroll	27	27	27	0.2%	30	34	47	3.1%	28	29	32	1.0%
Elkhart	Elkhart Municipal	EKM	32	Elkhart	32	32	32	0.5%	33	35	40	1.3%	33	35	38	1.0%
Fort Wayne	Smith Field	SMD	50	Allen	50	50	50	0.5%	50	50	50	0.0%	52	54	60	1.0%
Frankfort	Frankfort Municipal	FKR	30	Clinton	30	30	30	0.1%	30	30	30	0.0%	31	32	36	1.0%
French Lick	French Lick Municipal	FRH	10	Orange	10	10	10	0.3%	10	10	10	0.0%	10	10	10	0.0%
Gary	Gary/Chicago International	GYY	74	Lake	74	74	74	0.1%	77	82	92	1.2%	76	80	89	1.0%
Goshen	Goshen Municipal	GSH	67	Elkhart	67	67	67	0.5%	68	70	73	0.5%	69	73	80	1.0%
Greencastle	Putnam County Regional	GPC	24	Putnam	24	24	24	0.3%	24	24	24	0.0%	25	26	29	1.0%
Greensburg	Greensburg Municipal	I34	29	Decatur	29	29	29	0.2%	29	29	29	0.0%	29	29	29	0.0%
Griffith	Griffith-Merrillville	05C	55	Lake	55	55	55	0.1%	55	56	57	0.2%	57	60	66	1.0%
Huntingburg	Huntingburg	HNB	38	Dubois	38	38	38	0.4%	38	38	38	0.0%	39	41	45	1.0%
Huntington	Huntington Municipal	HHG	56	Huntington	56	56	56	0.1%	59	64	75	1.6%	58	61	67	1.0%
Indianapolis	Eagle Creek Airpark	EYE	54	Marion	54	54	54	0.2%	56	59	66	1.1%	56	58	65	1.0%
Indianapolis	Hendricks County-Gordon Graham Field	2R2	44	Hendricks	44	44	44	1.6%	44	44	44	0.0%	45	46	48	0.5%
Indianapolis	Indianapolis Downtown Heliport	8A4	1	Marion	1	1	1	0.2%	1	1	1	0.0%	1	1	1	1.0%
Indianapolis	Indianapolis Executive	TYQ	84	Boone	84	84	84	2.0%	86	90	98	0.9%	87	91	100	1.0%
Indianapolis	Indianapolis Metropolitan	UMP	137	Hamilton	137	137	137	1.9%	145	161	196	2.0%	141	148	164	1.0%
Indianapolis	Indianapolis Regional	MQJ	100	Hancock	100	100	100	1.3%	103	108	118	0.9%	103	108	120	1.0%
Indianapolis	Indy South Greenwood	HFY	90	Johnson	90	90	90	1.7%	93	97	107	1.0%	93	97	108	1.0%
Jeffersonville	Clark Regional	JVY	48	Clark	48	48	48	0.7%	48	48	48	0.0%	49	52	57	1.0%
Kendallville	Kendallville Municipal	C62	28	Noble	28	28	28	0.2%	28	28	28	0.0%	28	29	31	0.5%

Facility Information			Base Year	Population Methodology					Applied FAA TAF CAGR Methodology				Based Aircraft Fleet Mix Methodology			
Associated City	Facility Name	FAA ID	2021	County	2024	2029	2039	CAGR	2024	2029	2039	CAGR	2024	2029	2039	CAGR
Kentland	Kentland Municipal	50I	13	Newton	13	13	13	0.2%	13	13	14	0.3%	13	13	13	0.0%
Knox	Starke County	OXI	26	Starke	26	26	26	0.4%	26	26	27	0.2%	27	28	31	1.0%
Kokomo	Kokomo Municipal	OKK	54	Howard	54	54	54	0.0%	54	54	54	0.0%	56	58	65	1.0%
La Porte	La Porte Municipal	PPO	65	La Porte	65	65	65	0.1%	68	72	83	1.3%	67	70	78	1.0%
Lafayette	Purdue University	LAF	86	Tippecanoe	86	86	86	0.6%	88	92	100	0.9%	89	93	103	1.0%
Lebanon	Boone County*	6I4	36	Boone	36	36	36	2.0%	36	37	37	0.2%	37	37	39	0.5%
Logansport	Logansport/Cass County	GGP	17	Cass	17	17	17	-0.1%	17	17	17	0.0%	17	18	19	0.5%
Madison	Madison Municipal Airport	IMS	55	Jefferson	55	55	55	0.5%	58	62	73	1.6%	57	60	66	1.0%
Marion	Marion Municipal	MZZ	39	Grant	39	39	39	-0.2%	41	45	53	1.8%	40	42	47	1.0%
Michigan City	Michigan City Municipal-Phillips Field	MGC	41	La Porte	41	41	41	0.1%	42	42	44	0.4%	42	44	49	1.0%
Monticello	White County	MCX	11	White	11	11	11	0.1%	11	11	11	0.0%	11	12	13	1.0%
Muncie	Delaware County Regional	MIE	31	Delaware	31	31	31	-0.2%	36	46	75	5.0%	32	34	37	1.0%
New Castle	New Castle Henry County Marlatt Field	UWL	16	Henry	16	16	16	0.0%	16	16	16	0.0%	16	17	19	1.0%
North Vernon	North Vernon	OVO	30	Jennings	30	30	30	0.3%	30	30	30	0.0%	30	31	33	0.5%
Paoli	Paoli Municipal	I42	12	Orange	12	12	12	0.3%	12	12	12	0.0%	12	13	14	1.0%
Peru	Grissom ARB*	GUS	16	Miami	16	16	16	-0.2%	16	16	17	0.2%	16	17	19	1.0%
Peru	Peru Municipal	I76	15	Miami	15	15	15	-0.2%	15	15	16	0.3%	15	15	15	0.0%
Plymouth	Plymouth Municipal	C65	21	Marshall	21	21	21	0.3%	21	21	21	0.0%	22	23	25	1.0%
Portland	Portland Municipal	PLD	11	Jay	11	11	11	-0.1%	11	11	12	0.5%	11	11	12	0.5%
Rensselaer	Jasper County	RZL	21	Jasper	21	21	21	0.5%	21	21	21	0.0%	21	22	23	0.5%
Richmond	Richmond Municipal	RID	32	Wayne	32	32	32	-0.3%	33	34	36	0.6%	33	35	38	1.0%
Rochester	Fulton County	RCR	11	Fulton	11	11	11	0.1%	11	11	11	0.0%	11	12	13	1.0%
Salem	Salem Municipal	I83	10	Washington	10	10	10	0.6%	10	10	10	0.0%	10	10	10	0.0%
Seymour	Freeman Municipal	SER	51	Jackson	51	51	5	0.2%	53	56	64	1.3%	53	55	61	1.0%
Shelbyville	Shelbyville Municipal	GEZ	50	Shelby	50	50	50	0.3%	50	50	50	0.0%	52	54	60	1.0%
Sheridan	Sheridan*	5I4	29	Hamilton	29	29	29	1.9%	29	29	29	0.0%	29	30	32	0.5%
Sullivan	Sullivan County	SIV	20	Sullivan	20	20	20	0.0%	20	20	20	0.0%	20	21	22	0.5%
Tell City	Perry County Municipal	TEL	14	Perry	14	14	14	0.1%	14	14	14	0.0%	14	14	14	0.0%
Terre Haute	Terre Haute Regional	HUF	74	Vigo	74	74	74	0.0%	79	87	107	2.1%	76	80	89	1.0%
Valparaiso	Porter County Regional	VPZ	115	Porter	115	115	115	1.1%	120	127	145	1.3%	118	125	138	1.0%
Wabash	Wabash Municipal	IWH	9	Wabash	9	9	9	-0.1%	9	9	9	0.0%	9	9	10	0.5%
Warsaw	Warsaw Municipal	ASW	38	Koscuisko	38	38	38	0.5%	38	38	39	0.1%	39	41	45	1.0%
Washington	Daviess County	DCY	26	Daviess	26	26	26	0.4%	26	26	26	0.0%	27	28	31	1.0%
Winamac	Arens Field	RWN	10	Pulaski	10	10	10	0.0%	10	10	10	0.0%	10	10	10	0.0%
Winchester	Randolph County	I22	9	Randolph	9	9	9	-0.2%	9	9	10	0.7%	9	9	9	0.0%
State Totals			**2,848**	**N/A**	**2,893**	**2,980**	**3,161**	**0.55%**	**2,922**	**3,045**	**3,349**	**0.81%**	**2,926**	**3,062**	**3,353**	**0.86%**

*Note: *Non-NPIAS facilities. Sources: Basedaircraft.com; 2022 ISASP Airport Manager Survey, 2021; FAA Form 5010; 2020 FAA TAF; FAA Aerospace Forecast, 2019-2039; Woods & Poole, 2021; Kimley-Horn, 2021.*

4.4.2. GA Operations Forecasts

GA operations are all operations that are not conducted by commercial service or military aircraft. GA operations occur at GA and commercial service facilities and include operations such as aerial application, flight training, emergency response, aerial firefighting, business or corporate flights, and recreational flying. It is important to note that GA operation types were examined prior to conducting forecasts, and any military operations were excluded from this analysis. GA operations only include local and itinerant GA operations that occur at GA and commercial service airports. Official operation counts are only available airports with Air Traffic Control Towers (ATCTs) and there are only 13 ATCTs in the Indiana aviation system. Operation counts at airports without ATCTs are largely estimates, however the 18 airports presented in **Table 4.4** have traffic counting systems in place. There are several additional facilities that plan on getting an application to INDOT for these counting systems by the end of 2022.

Table 4.4. ISASP Airports with Traffic Counting Systems

Associated City	Airport Name	FAA ID
Commercial Service		
Evansville	Evansville Regional*	EVV
Fort Wayne	Fort Wayne International*	FWA
GA		
Anderson	Anderson Municipal - Darlington Field*	AID
Auburn	DeKalb County	GWB
Bedford	Virgil I Grissom Municipal	BFR
Bloomington	Monroe County*	BMG
Fort Wayne	Smith Field	SMD
French Lick	French Lick Municipal	FRH
Indianapolis	Indianapolis Executive	TYQ
Indianapolis	Indy South Greenwood	HFY
Huntingburg	Huntingburg Municipal	HNB
Huntington	Huntington Municipal	HHG
Kentland	Kentland Municipal	50I
Kokomo	Kokomo Municipal	OKK
Muncie	Delaware County*	MIE
Sullivan	Sullivan County	SIV
Wabash	Wabash Municipal	IWH
Warsaw	Warsaw Municipal	ASW

*Note: *These airports also have an on-airport ATCT. Source: INDOT, 2022; Kimley-Horn, 2022.*

Two methodologies were analyzed to forecast GA operations at Indiana's facilities over the 20-year planning horizon. The base year for GA operations forecasts is 2019. The 2020 FAA TAF is the base year data source for 2019 GA operations at NPIAS airports, and the ISASP Airport Manager Survey was used to source 2019 GA operations at non-NPIAS

facilities.[9] Non-NPIAS facilities are not included in the FAA TAF; therefore, the alternate source of the ISASP Airport Manager Survey was used for the base data for the non-NPIAS facilities. The ISASP Airport Manager Survey includes airport-reported data that was collected during the data collection phase of the 2022 ISASP. The following sections present the two methodologies and identify the preferred methodology for projecting GA operations at Indiana facilities over the 20-year planning horizon.

To provide additional historical context on how operations have changed over the last 10+ years, historical operations data were sourced from acoustical counters that were previously installed at Indiana system facilities. This data is in included in **Figure 4.5** at the state level (for years 2009 and 2014) and in **Table 4.12**, included at the end of this chapter, at the individual airport level (for years 2009-2019). It is important to note that this source of operations data includes both commercial service and GA operations and differs from the 2022 ISASP Airport Manager Survey and 2020 FAA TAF data. As such, the counts provided by each source differ. Moreover, the acoustical counter program ended due to more accurate operations counters becoming available. The new operations counter are installed at the airports shown in **Table 4.4.**

4.4.2.1. Option #1: Historic ISASP CAGR Methodology

The Historic ISASP CAGR Methodology utilized the historic CAGR associated with each system airport from the 2012 ISASP operations forecast for years 2010-2031.[10] Then, the CAGR from 2010-2031 was applied to the 2019 baseline GA operations. Growth rates varied by airport but resulted in an overall state average CAGR of 1.2 percent. The CAGR calculated from the 2012 ISASP accounts for both GA and commercial service operations at commercial service airports because the 2012 ISASP did not separate these operations. Consequently, the GA operations projected using this methodology may be slightly overinflated, since the CAGR applied accounts for commercial operation growth and not solely GA operation growth. Commercial service operations are forecasted separately in the 2022 ISASP, as discussed in **Section 4.4.3**. The results of this methodology are presented in comparison to the other methodologies for projecting GA operations in **Figure 4.5** and **Table 4.5**.

4.4.2.2. Option #2: Airport Reference Code (ARC) Methodology

The ARC Methodology utilized each individual airport's ARC and then applied a projected annual growth rate based on a review of the *2019-2039 FAA Aerospace Forecas*t that evaluated hours flown and active GA and air taxi aircraft fleet. Less demanding ARCs (A-I – B-II) were associated with less demanding aircraft, such as single and multi-engine aircraft, whereas more demanding ARCs (C-II – D-I or greater) were associated with more demanding aircraft, such as turboprop or jet aircraft. The following growth rates were utilized to generate future operations projections:

- If an airport's ARC is A-I or B-I, a 0.1% growth rate was applied.
- If an airport's ARC is B-II, a 0.4% growth rate was applied.
- If an airport's ARC is C-II, a 1.0% growth rate was applied.
- If an airport's ARC is C-III or C-IV, a 1.2% growth rate was applied.
- If an airport's ARC is D-I or greater, a 1.4% growth rate was applied

[9] It is important to note that recently growing flight training programs, such as LIFT Academy, Five Alpha, and others, are generating operations that may not be reflected in the TAF estimates used for the base year data. It is unknown exactly how many operations these flight training programs contribute to the system.

[10] The 2012 ISASP utilized an Operations per Based Aircraft (OPBA) methodology to forecast GA and commercial service operations. This method assumed that the number of operations at an airport will grow as the number of aircraft based at an airport grows.

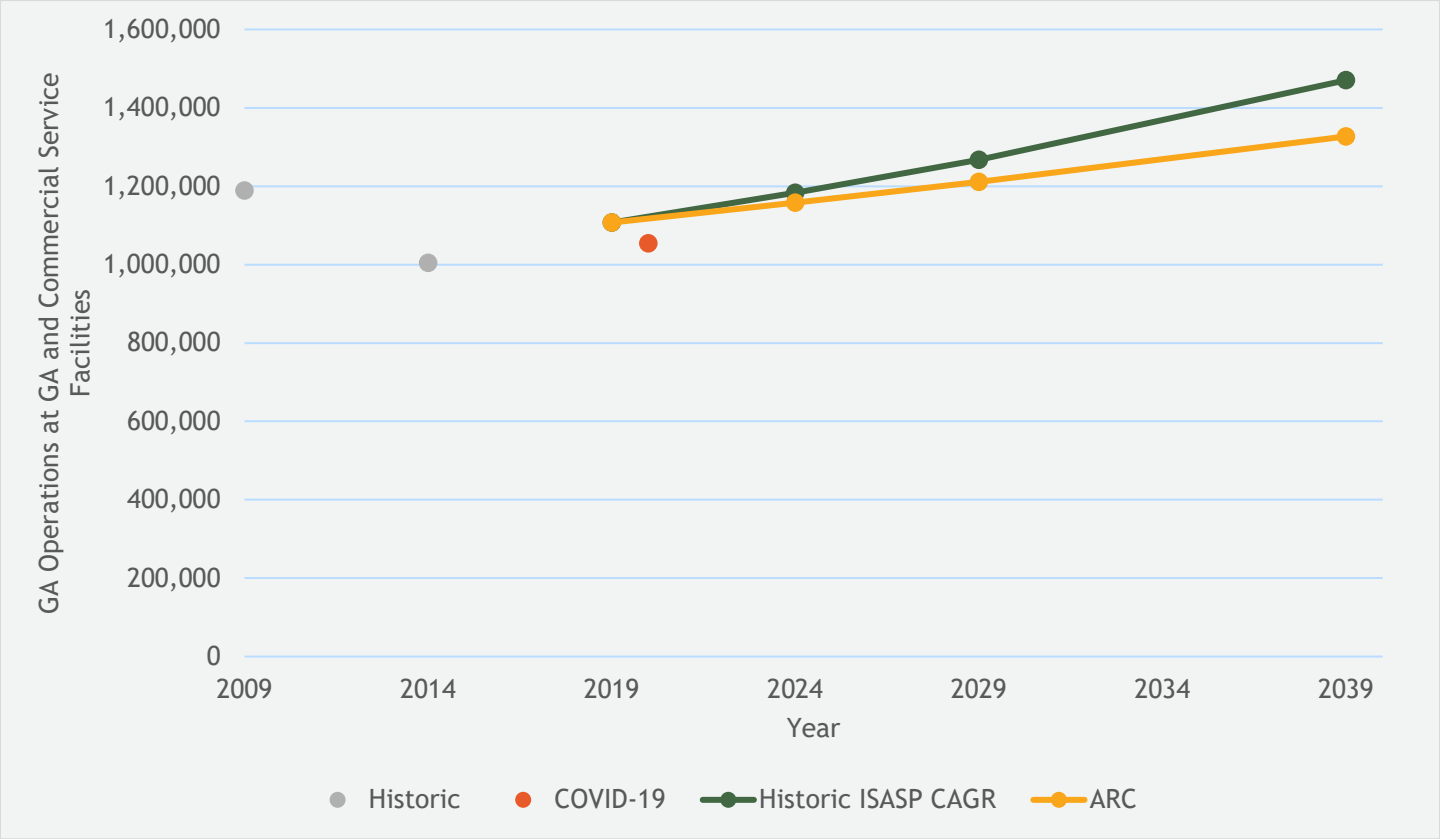
The purpose of these specific growth rate percentages was to model the operational growth by type of aircraft operating at each airport, even though it may not be the predominant aircraft at the airport. This method assumed that the airport's operations will grow or decline at the same rates of growth or decline predicted nationally based on anticipated growth in different types of aircraft. As discussed in **Section 4.4.1.3** Table 28 of the *2019-2039 FAA Aerospace Forecast* was used to identify the growth rates presented in this methodology. For the same reasoning as presented in **Section 4.4.1.3,** growth rates from Table 28 were tempered to present a conservative estimate for aviation growth over the 20-year planning period that factors in activity by smaller less demanding aircraft and by larger more demanding aircraft. The results of this methodology are presented in comparison to the other methodologies for projecting GA operations in **Figure 4.5** and **Table 4.5**.

4.4.2.3. Preferred GA Operations Forecast Methodology

Figure 4.5 and **Table 4.5** present the projected GA operations activity levels at GA and commercial service facilities for the 2022 ISASP. The GA operations data for 2020 is also included in **Figure 4.5** for reference. While the forecasts utilized 2019 as the base year, 2020 information is included to provide additional context of how GA operations were impacted during COVID-19-related lockdowns and travel restrictions. As shown in **Figure 4.5**, the forecasts from the Historic ISASP CAGR and ARC methodologies increase at a comparable rate for the first five years of the forecast; after 2024, the rate of operations forecasted using the Historic ISASP CAGR methodology increases more rapidly as it is based on an Operations per Based Aircraft (OPBA) methodology which assumes that operations will increase at the same rate based aircraft increase.[11] The preferred methodology selected was the **ARC Methodology** because it captures the most nuanced airport factors that result in a forecast specific to the type of activity each airport supports. The ARC Methodology results in a projected increase of 219,700 GA operations over the 20-year planning horizon, a CAGR of 0.9 percent.

[11] In general, the OPBA methodology is no longer recommended for forecasting GA operations because it relies too heavily on operations data that is largely estimated due to the majority of GA facilities not having air traffic control towers (ATCTs).

Figure 4.5. Historic GA Operations and 2019-2039



Sources: Basedaircraft.com, 2021; INDOT Office of Acoustical Counters 2009-2014; 2022 ISASP Airport Manager Survey, 2021; FAA Form 5010, 2021; 2020 FAA TAF; FAA Aerospace Forecast, 2019-2039; Woods & Poole, 2021; Kimley-Horn, 2021.

Table 4.5. GA Operations Forecasts, 2019-2039

Facility Information			Base Year	Historic ISASP CAGR Methodology				ARC Methodology			
Associated City	Facility Name	FAA ID	2019	2024	2029	2039	CAGR	2024	2029	2039	CAGR
Commercial Service											
Evansville	Evansville Regional	EVV	20,900	24,540	28,820	39,730	3.3%	22,180	23,550	26,530	1.2%
Fort Wayne	Fort Wayne International	FWA	17,200	19,110	21,230	26,200	2.1%	18,440	19,770	22,720	1.4%
Indianapolis	Indianapolis International	IND	14,290	15,710	17,280	20,910	1.9%	15,310	16,420	18,860	1.4%
South Bend	South Bend International	SBN	23,850	25,210	26,660	29,820	1.1%	25,310	26,870	30,271	1.2%
GA											
Anderson	Anderson Municipal-Darlington Field	AID	19,170	20,050	20,970	22,950	0.9%	20,140	21,170	23,390	1.0%
Angola	Tri-State Steuben County	ANQ	5,960	6,230	6,520	7,140	0.9%	6,080	6,200	6,450	0.4%
Auburn	DeKalb County	GWB	13,530	14,150	14,800	16,200	0.9%	13,800	14,080	14,650	0.4%
Bedford	Virgil I Grissom Municipal	BFR	3,520	3,690	3,860	4,220	0.9%	3,590	3,670	3,820	0.4%
Bloomington	Monroe County	BMG	27,850	29,130	30,480	33,350	0.9%	29,850	32,000	36,780	1.4%
Brazil	Brazil Clay County*	0I2	2,030	2,130	2,230	2,440	0.9%	2,040	2,050	2,080	0.1%
Columbus	Columbus Municipal	BAK	47,190	49,360	51,640	56,510	0.9%	50,090	53,160	59,900	1.2%
Connersville	Mettel Field	CEV	3,500	3,670	3,830	4,200	0.9%	3,720	3,950	4,450	1.2%
Crawfordsville	Crawfordsville Regional	CFJ	4,870	5,090	5,330	5,830	0.9%	4,970	5,070	5,270	0.4%

Facility Information			Base Year	Historic ISASP CAGR Methodology				ARC Methodology			
Associated City	Facility Name	FAA ID	2019	2024	2029	2039	CAGR	2024	2029	2039	CAGR
Delphi	Delphi Municipal	1I9	6,780	7,090	7,420	8,120	0.9%	6,810	6,840	6,910	0.1%
Elkhart	Elkhart Municipal	EKM	31,790	33,250	34,790	38,070	0.9%	33,740	35,820	40,350	1.2%
Fort Wayne	Smith Field	SMD	19,680	20,590	21,540	23,580	0.9%	20,080	20,490	21,320	0.4%
Frankfort	Frankfort Municipal	FKR	11,380	11,910	12,460	13,630	0.9%	11,610	11,845	12,327	0.4%
French Lick	French Lick Municipal	FRH	5,730	6,000	6,280	6,870	0.9%	5,850	5,970	6,210	0.4%
Gary	Gary/Chicago International	GYY	18,750	19,610	20,510	22,450	0.9%	20,090	21,540	24,750	1.4%
Goshen	Goshen Municipal	GSH	36,190	37,860	39,610	43,350	0.9%	38,800	41,590	47,790	1.4%
Greencastle	Putnam County Regional	GPC	3,460	3,620	3,790	4,150	0.9%	3,530	3,600	3,750	0.4%
Greensburg	Greensburg Municipal	I34	2,700	2,830	2,960	3,230	0.9%	2,710	2,730	2,760	0.1%
Griffith	Griffith-Merrillville	05C	22,250	23,270	24,340	26,640	0.9%	22,690	23,150	24,090	0.4%
Huntingburg	Huntingburg	HNB	13,550	14,170	14,820	16,220	0.9%	13,820	14,100	14,670	0.4%
Huntington	Huntington Municipal	HHG	5,210	5,450	5,700	6,240	0.9%	5,240	5,260	5,320	0.1%
Indianapolis	Eagle Creek Airpark	EYE	20,870	22,170	23,550	26,580	1.2%	21,290	21,720	22,610	0.4%
Indianapolis	Hendricks County-Gordon Graham Field	2R2	10,410	11,670	13,070	16,410	2.3%	10,620	10,840	11,280	0.4%

Facility Information			Base Year	Historic ISASP CAGR Methodology				ARC Methodology			
Associated City	Facility Name	FAA ID	2019	2024	2029	2039	CAGR	2024	2029	2039	CAGR
Indianapolis	Indianapolis Downtown Heliport*	8A4	2,100	2,210	2,330	2,600	1.1%	2,110	2,120	2,140	0.10%
Indianapolis	Indianapolis Executive	TYQ	33,940	43,730	56,350	93,570	5.2%	35,670	37,490	41,410	1.0%
Indianapolis	Indianapolis Metropolitan	UMP	23,850	26,040	28,430	33,890	1.8%	24,330	24,820	25,830	0.4%
Indianapolis	Indianapolis Regional	MQJ	31,010	34,340	38,020	46,620	2.1%	31,630	32,270	33,590	0.4%
Indianapolis	Indy South Greenwood	HFY	28,820	30,150	31,540	34,510	0.9%	29,400	29,990	31,210	0.4%
Jeffersonville	Clark Regional	JVY	44,430	46,480	48,620	53,210	0.9%	47,630	51,060	58,670	1.4%
Kendallville	Kendallville Municipal	C62	6,080	6,360	6,650	7,280	0.9%	6,200	6,330	6,580	0.4%
Kentland	Kentland Municipal	50I	6,690	7,000	7,320	8,020	0.9%	6,730	6,760	6,830	0.1%
Knox	Starke County	OXI	22,150	23,170	24,240	26,520	0.9%	22,590	23,050	23,990	0.4%
Kokomo	Kokomo Municipal	OKK	16,690	17,450	18,260	19,980	0.9%	17,890	19,170	22,030	1.4%
La Porte	La Porte Municipal	PPO	13,890	16,340	19,240	26,640	3.3%	14,170	14,450	15,040	0.4%
Lafayette	Purdue University	LAF	115,950	121,300	126,900	138,880	0.9%	121,870	128,080	141,480	1.0%
Lebanon	Boone County*	6I4	2,250	2,350	2,460	2,690	0.9%	2,260	2,270	2,300	0.1%
Logansport	Logansport/ Cass County	GGP	5,740	6,000	6,280	6,870	0.9%	5,850	5,970	6,210	0.4%
Madison	Madison Municipal Airport	IMS	8,730	9,130	9,550	10,460	0.9%	8,910	9,090	9,460	0.4%

Facility Information			Base Year	Historic ISASP CAGR Methodology				ARC Methodology			
Associated City	Facility Name	FAA ID	2019	2024	2029	2039	CAGR	2024	2029	2039	CAGR
Marion	Marion Municipal-McKinney Field	MZZ	8,040	9,980	12,370	19,030	4.4%	8,620	9,240	10,620	1.4%
Michigan City	Michigan City Municipal-Phillips Field	MGC	8,670	9,070	9,490	10,380	0.9%	8,710	8,760	8,840	0.1%
Monticello	White County	MCX	6,790	7,100	7,430	8,130	0.9%	6,930	7,070	7,360	0.4%
Muncie	Delaware County Regional	MIE	29,940	34,190	39,050	50,930	2.7%	32,090	34,400	39,530	1.4%
New Castle	New Castle Henry County Marlatt Field	UWL	2,260	2,370	2,470	2,710	0.9%	2,270	2,280	2,310	0.1%
North Vernon	North Vernon	OVO	7,570	7,910	8,280	9,060	0.9%	7,720	7,870	8,190	0.4%
Paoli	Paoli Municipal	I42	2,340	2,440	2,560	2,800	0.9%	2,350	2,360	2,380	0.1%
Peru	Grissom ARB*	GUS	70	70	70	70	0.0%	77	83	95	1.4%
Peru	Peru Municipal	I76	2,550	2,660	2,790	3,050	0.9%	2,560	2,570	2,600	0.1%
Plymouth	Plymouth Municipal	C65	10,500	10,980	11,490	12,580	0.9%	10,710	10,930	11,370	0.4%
Portland	Portland Municipal	PLD	1,840	1,920	2,010	2,200	0.9%	1,880	1,910	1,990	0.4%
Rensselaer	Jasper County	RZL	8,630	9,030	9,450	10,340	0.9%	8,680	8,720	8,810	0.1%
Richmond	Richmond Municipal	RID	14,570	15,250	15,950	17,450	0.9%	14,870	15,170	15,780	0.4%
Rochester	Fulton County	RCR	17,390	18,190	19,030	20,820	0.9%	17,740	18,090	18,830	0.4%
Salem	Salem Municipal	I83	5,460	5,720	5,980	6,540	0.9%	5,570	5,690	5,920	0.4%
Seymour	Freeman Municipal	SER	20,580	21,530	22,520	24,650	0.9%	22,060	23,650	27,180	1.4%

Facility Information			Base Year	Historic ISASP CAGR Methodology				ARC Methodology			
Associated City	Facility Name	FAA ID	2019	2024	2029	2039	CAGR	2024	2029	2039	CAGR
Shelbyville	Shelbyville Municipal	GEZ	18,050	22,310	27,580	42,160	4.3%	18,410	18,780	19,550	0.4%
Sheridan	Sheridan*	5I4	3,760	3,930	4,110	4,500	0.9%	3,780	3,800	3,830	0.1%
Sullivan	Sullivan County	SIV	5,370	5,610	5,870	6,430	0.9%	5,470	5,580	5,810	0.4%
Tell City	Perry County Municipal	TEL	3,250	3,390	3,550	3,890	0.9%	3,260	3,280	3,310	0.1%
Terre Haute	Terre Haute Regional	HUF	61,360	64,190	67,150	73,490	0.9%	65,780	70,510	81,030	1.4%
Valparaiso	Porter County Regional	VPZ	69,190	70,200	71,230	73,330	0.3%	73,440	77,950	87,830	1.2%
Wabash	Wabash Municipal	IWH	4,510	4,710	4,930	5,400	0.9%	4,530	4,550	4,600	0.1%
Warsaw	Warsaw Municipal	ASW	13,370	13,990	14,640	16,020	0.9%	14,060	14,770	16,320	1.0%
Washington	Daviess County	DCY	3,030	3,170	3,310	3,630	0.9%	3,090	3,150	3,280	0.4%
Winamac	Arens Field	RWN	1,200	1,260	1,310	1,440	0.9%	1,220	1,250	1,300	0.4%
Winchester	Randolph County	I22	2,080	2,170	2,270	2,490	0.9%	2,120	2,160	2,250	0.4%
State Totals			1,107,300	1,182,950	1,267,570	1,470,300	1.4%	1,157,640	1,210,940	1,327,000	0.9%

*Notes: GA operations are rounded to the nearest 10. Totals may not sum due to rounding. *Non-NPIAS facilities. Sources: Basedaircraft.com, 2021; 2022 ISASP Airport Manager Survey, 2021; FAA Form 5010, 2021; 2020 FAA TAF; FAA Aerospace Forecast, 2019-2039; Kimley-Horn, 2021.*

4.4.3. Commercial Service Operations Forecasts

Commercial service operations include the total number of air carrier and air taxi/commuter operations and do not include GA or military operations that occur at commercial service airports. Commercial service operations were forecasted separately from GA operations at commercial service airports because the service types are distinct and impacted differently by external and internal factors. The baseline year for commercial service operations forecasts is 2019, and the 2019 baseline commercial service operation counts were sourced from the 2020 FAA TAF referenced in March of 2020. The following sections present the two methodology options and identify the preferred methodology selected for projecting commercial service operations over the 20-year planning horizon.

It is important to recognize that the TAF does not distinguish air cargo operations from other types of operations; instead, these cargo operations are typically reflected as air carrier or air taxi operations, depending on the size of the aircraft and associated payload. Although not forecasted separately for the 2022 ISASP, Indiana is home to significant air cargo activity, particularly at the commercial service airports. Specifically, Indianapolis International Airport (IND) is home to the second largest FedEx Express hub in the world, employing nearly 4,000 staff with a sort capacity of 99,000 packages per hour with plans in motion to expand the operation in the coming years.[12] Cargo operations reported by FedEx and Cargo Lux at the airport totaled 31,654 in 2019 and grew to 34,018 in 2020. At Fort Wayne International Airport (FWA), cargo operations totaled 1,977 in 2019 and 1,854 in 2020 and were provided at least in part by small operators. Evansville Regional Airport (EVV) reported approximately 300 air cargo operations in both years, and South Bend International Airport (SBN) reported approximately 600 for both years, also with small operators or subsidiaries of larger integrated carriers such as FedEx.

4.4.3.1. FAA TAF for Commercial Service Operations Methodology

The TAF is the official FAA forecast of aviation activity for NPIAS airports. The FAA prepares forecasts for all major users of the National Airspace System (NAS) as part of the TAF, and the TAF is prepared to meet the budget and planning needs of the FAA. The TAF is updated and published every year. For the purpose of this methodology, commercial service operations forecasts for years 2024, 2029, and 2039 were taken as-is from the 2020 FAA TAF. The TAF process for forecasting commercial service operations at facilities with more 100,000 annual enplanements is based on a bottom-up approach. This approach applies to all four Indiana commercial service facilities and uses origin and destination (O&D) market demand forecasts using quarterly sample data to model passenger flow on a quarterly basis. The analysis includes regression analysis using fares, regional demographics, and regional economic factors as the independent variables. The results of this analysis are then combined with Department of Transportation (DOT) T-100 data to identify passenger forecasts by airport pair and segment pair. Results of the segment pair passenger enplanement forecasts are then used to generate segment pair operations forecasts.[13] The results of this methodology are presented in comparison to the other methodology for projecting commercial service operations in **Figure 4.6** and **Table 4.6**.

[12] https://www.fedex.com/en-us/about/policy/aviation/fedex-express-indianapolis-hub.html
[13] FAA TAF Forecast Process, https://www.faa.gov/sites/faa.gov/files/data_research/aviation/taf/taf_forecast_process.pdf

4.4.3.2. Commercial Service Type Growth Rate Methodology

The Commercial Service Type Growth Rate Methodology used commercial operations growth rates based on Table 32 of the *FAA Aerospace Forecast, 2019-2039* and applied those growth rates to the 2019 baseline commercial operations to project growth over the next 20 years for Indiana's commercial airports. FAA's forecasts show a slower rate of growth for airports served by regional carriers than airports served by mainline air carriers. The following growth rates were utilized to generate future commercial service operations forecasts:

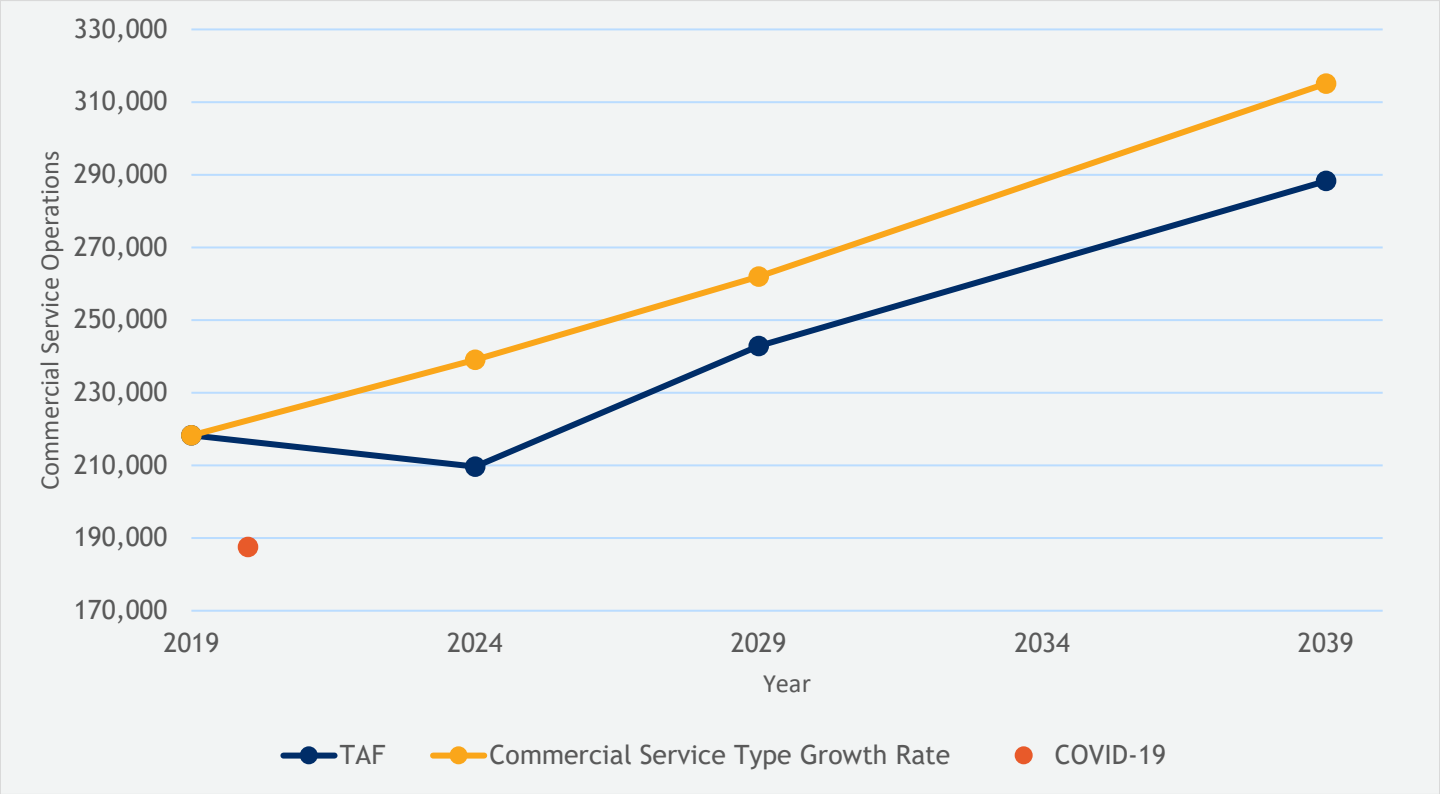
- If an airport is served mostly (or, more than half) by regional air carriers: 1.0% growth rate was applied
- If an airport is served mostly (or, more than half) by mainline air carriers: 2.1% growth rate was applied

The purpose of these specific growth rate percentages was to model the operational growth by type of carrier operating at each commercial service airport. This method assumed that the airport's operations will grow or decline at the same rates of growth or decline predicted nationally for the type of carrier. The results of this methodology are presented in comparison to the other methodology for projecting commercial service operations in **Figure 4.6** and **Table 4.6**.

4.4.3.3. Preferred Commercial Service Operations Forecast Methodology

Figure 4.6 and **Table 4.6** present the projected commercial service operations activity levels at commercial service airports for the 2022 ISASP. For reference, commercial service operations data for 2020 are included in **Figure 4.6** and were sourced from the 2020 FAA TAF. While the forecasts were not projected from 2020, it is included to provide additional context of how commercial service operations were impacted during COVID-19-related lockdowns and travel restrictions. As shown in **Figure 4.6**, the Commercial Service Type Growth Rate Methodology increases at a steady rate between 2019 and 2029, while the 2020 FAA TAF shows a decrease in 2024 over that same period. From 2029 to 2039 the Commercial Service Type Growth Rate Methodology and the 2020 FAA TAF increase at a comparable rate. While the TAF process follows a bottom-up approach based on regional demographics and regional economic factors, it was limited in its ability to accurately reflect the rebound in activity occurring after impacts of the COVID-19 pandemic that were presented earlier in the chapter. As presented in **Table 4.1**, total operations at commercial service airports already increased by more than 25 percent between 2020 and 2021, with 2020 being the year most impacted by COVID-19. Moreover, when comparing operations at commercial service airports occurring in 2021 and 2019 there is only a one percent decrease. As such, the **Commercial Service Type Growth Rate Methodology** was chosen as the preferred methodology because it is most in alignment with the current activity levels being experienced at the four commercial service airports in Indiana. Historically, TAF projections accurately reflect local conditions based on the bottom-up methodology used, however, the 2020 TAF does not capture the local COVID-19 recovery that is currently being experienced in Indiana. The Commercial Service Type Growth Rate Methodology resulted in a projected increase of 96,844 commercial service operations over the 20-year planning horizon, associated with a CAGR of 1.9 percent.

Figure 4.6. Commercial Service Operations Forecasts, 2019-2039



Sources: 2020 FAA TAF; FAA Aerospace Forecast, 2019-2039; Kimley-Horn, 2021.

Table 4.6. Commercial Service Operations Forecast, 2019-2039

Airport Information			Base Year	TAF Methodology				Commercial Service Type Growth Rate Methodology			
Associated City	Airport Name	FAA ID	2019	2024	2029	2039	CAGR	2024	2029	2039	CAGR
Evansville	Evansville Regional	EVV	12,810	6,000	6,870	7,850	1.0%	13,470	14,160	15,640	2.4%
Fort Wayne	Fort Wayne International	FWA	19,300	13,760	15,380	17,860	1.0%	20,290	21,320	23,550	0.4%
Indianapolis	Indianapolis International	IND	165,290	176,060	205,180	244,890	2.0%	183,390	203,470	250,470	2.0%
South Bend	South Bend International	SBN	20,840	13,840	15,460	17,670	1.0%	21,900	23,020	25,430	0.8%
		Total	**218,250**	**209,660**	**242,880**	**288,260**	**1.9%**	**239,050**	**261,970**	**315,090**	**1.4%**

Notes: Commercial service operations are rounded to the nearest 10. Totals may not sum due to rounding. Sources: 2020 FAA TAF; FAA Aerospace Forecast, 2019-2039; Kimley-Horn, 2021.

4.4.4. Statewide Military Operations

Military operations occur at both commercial service and GA facilities across the State of Indiana. The statewide military operations were not included in the 2022 ISASP forecasts because military activity is dependent on national security needs that are unpredictable; therefore, the number of statewide military operations at ISASP facilities were excluded from GA and commercial service operations forecasts. As such, statewide military operations projections for the 2022 ISASP were held constant throughout the 20-year planning horizon. The 2020 FAA TAF was used to source military operation counts at NPIAS ISASP facilities, and airport-reported military operations were used for non-NPIAS facilities. Thirty-six of the 69 ISASP facilities did not have any military operations to report. According to the 2020 FAA TAF, and information recorded on the 2022 ISASP Airport Manager Survey, Columbus Municipal Airport (BAK) had the most military operations in 2019, with 3,577 military operations. Overall, the state experienced over 23,000 military operations in 2019. **Table 4.7** summarizes statewide military operations over the 20-year planning horizon.

Table 4.7. Statewide Military Operations Forecasts, 2019-2039

Associated City	Airport Name	FAA ID	2019	2024	2029	2039
Commercial Service						
Evansville	Evansville Regional	EVV	1,380	1,380	1,380	1,380
Fort Wayne	Fort Wayne International*	FWA	2,570	2,570	2,570	2,570
Indianapolis	Indianapolis International	IND	920	920	920	920
South Bend	South Bend International	SBN	440	440	440	440
GA						
Anderson	Anderson Municipal-Darlington Field	AID	190	190	190	190
Angola	Tri-State Steuben County	ANQ	0	0	0	0
Auburn	DeKalb County	GWB	0	0	0	0
Bedford	Virgil I Grissom Municipal	BFR	130	130	130	130
Bloomington	Monroe County	BMG	340	340	340	340
Brazil	Brazil Clay County	0I2	0	0	0	0
Columbus	Columbus Municipal*	BAK	3,580	3,580	3,580	3,580
Connersville	Mettel Field	CEV	20	20	20	20
Crawfordsville	Crawfordsville Regional	CFJ	0	0	0	0
Delphi	Delphi Municipal	1I9	0	0	0	0
Elkhart	Elkhart Municipal	EKM	350	350	350	350
Fort Wayne	Smith Field	SMD	0	0	0	0
Frankfort	Frankfort Municipal	FKR	0	0	0	0
French Lick	French Lick Municipal	FRH	61	60	61	60
Gary	Gary/Chicago International*	GYY	2,560	2,560	2,560	2,560
Goshen	Goshen Municipal	GSH	0	0	0	0
Greencastle	Putnam County Regional	GPC	0	0	0	0
Greensburg	Greensburg Municipal	I34	0	0	0	0
Griffith	Griffith-Merrillville	05C	0	0	0	0

Associated City	Airport Name	FAA ID	2019	2024	2029	2039
Huntingburg	Huntingburg	HNB	140	140	140	140
Huntington	Huntington Municipal	HHG	0	0	0	0
Indianapolis	Eagle Creek Airpark	EYE	0	0	0	0
Indianapolis	Hendricks County-Gordon Graham Field	2R2	440	440	440	440
Indianapolis	Indianapolis Downtown Heliport	8A4	20	20	20	20
Indianapolis	Indianapolis Executive	TYQ	0	0	0	0
Indianapolis	Indianapolis Metropolitan	UMP	740	740	740	740
Indianapolis	Indianapolis Regional	MQJ	0	0	0	0
Indianapolis	Indy South Greenwood	HFY	1,230	1,230	1,230	1,230
Jeffersonville	Clark Regional	JVY	0	0	0	0
Kendallville	Kendallville Municipal	C62	0	0	0	0
Kentland	Kentland Municipal	50I	0	0	0	0
Knox	Starke County	OXI	0	0	0	0
Kokomo	Kokomo Municipal	OKK	680	680	680	680
La Porte	La Porte Municipal	PPO	0	0	0	0
Lafayette	Purdue University	LAF	110	110	110	110
Lebanon	Boone County	6I4	0	0	0	0
Logansport	Logansport/Cass County	GGP	240	240	240	240
Madison	Madison Municipal Airport	IMS	560	560	560	560
Marion	Marion Municipal-McKinney Field	MZZ	80	80	80	80
Michigan City	Michigan City Municipal-Phillips Field	MGC	0	0	0	0
Monticello	White County	MCX	0	0	0	0
Muncie	Delaware County Regional	MIE	270	270	270	270
New Castle	New Castle Henry County Marlatt Field	UWL	0	0	0	0
North Vernon	North Vernon*	OVO	2,390	2,390	2,390	2,390
Paoli	Paoli Municipal	I42	0	0	0	0
Peru	Grissom ARB*	GUS	430	430	430	430
Peru	Peru Municipal	I76	0	0	0	0
Plymouth	Plymouth Municipal	C65	0	0	0	0
Portland	Portland Municipal	PLD	410	410	410	410
Rensselaer	Jasper County	RZL	0	0	0	0
Richmond	Richmond Municipal	RID	150	150	150	150
Rochester	Fulton County	RCR	0	0	0	0
Salem	Salem Municipal	I83	0	0	0	0
Seymour	Freeman Municipal	SER	210	210	210	210
Shelbyville	Shelbyville Municipal	GEZ	950	950	950	950
Sheridan	Sheridan	5I4	160	160	160	160

Associated City	Airport Name	FAA ID	2019	2024	2029	2039
Sullivan	Sullivan County	SIV	0	0	0	0
Tell City	Perry County Municipal	TEL	250	250	250	250
Terre Haute	Terre Haute Regional*	HUF	470	470	470	470
Valparaiso	Porter County Regional	VPZ	700	700	700	700
Wabash	Wabash Municipal	IWH	0	0	0	0
Warsaw	Warsaw Municipal	ASW	0	0	0	0
Washington	Daviess County	DCY	0	0	0	0
Winamac	Arens Field	RWN	0	0	0	0
Winchester	Randolph County	I22	0	0	0	0
	Statewide Totals		**23,580**	**23,580**	**23,580**	**23,580**

*Notes: *Airport has a military base on-site. Military operations are rounded to the nearest 10. Totals may not sum due to rounding. Sources: 2020 FAA TAF; Kimley-Horn, 2021.*

4.4.5. Enplanements

Enplanements are defined as boarded passengers on a commercial service flight. Two methodologies were evaluated to project enplanements at the commercial service airports. The following sections present the two methodologies and the preferred methodology selected for projecting enplanements over the 20-year planning horizon. The base year selected for the enplanement forecasts is 2019, and the data was sourced from the 2020 FAA TAF.

4.4.5.1. Option #1: Population Methodology

The Population Methodology utilized Indiana's current and projected county level population growth as forecasted by Woods & Poole to determine a population to enplanements ratio reflecting comparable growth patterns. This methodology assumed that the ratio of population to enplanements for each commercial service airport will remain constant through the forecast years. County-specific growth rates for counties where there is a commercial service airport were calculated and applied to that airport's base year enplanements to develop commercial service enplanement forecasts over the 20-year planning horizon. While commercial service airports can service a larger area (sometimes multiple counties), the county in which the airport is located was used to maintain consistency with previous forecasts. Results are presented at the individual commercial service airport level and totaled to create a statewide projection of enplanements at commercial service airports. The results of this methodology are presented in comparison to other methodologies for projecting enplanements in **Figure 4.7** and **Table 4.9**.

4.4.5.2. Option #2: Commercial Service Type Methodology

The Commercial Service Type Methodology applied a projected annual growth rate based on forecasted growth in Table 10 and Table 25 of the *FAA Aerospace Forecast, 2019-2039*. Different rates were applied based on the type of commercial service provided (regional carriers versus mainline carriers). The following growth rates were utilized to generate future enplanement projections:

- If served mostly (or, more than half) by regional carriers only, a 1.6% average annual growth rate was applied.
- If served mostly (or, more than half) by mainline air carriers, a 1.8% average annual growth rate was applied.

This method assumed that the airport's existing level of enplanements will respond at the same rates of growth or decline based on the FAA's projections of activity for commercial service passenger activity.

The results of this methodology are presented in comparison to other methodologies for projecting enplanements in **Figure 4.7** and **Table 4.9.**

4.4.5.3. Preferred Enplanements Forecast Methodology

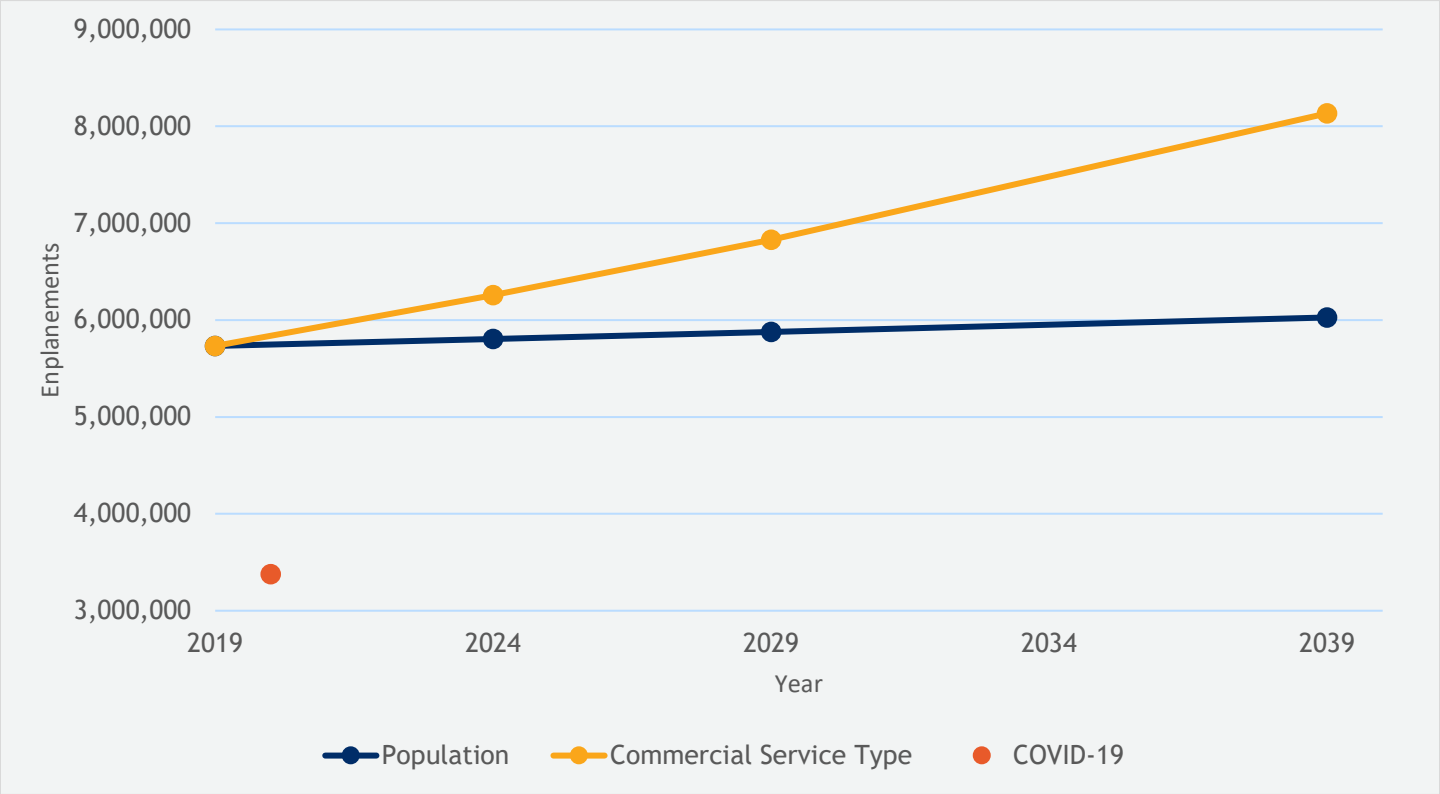
Figure 4.7 and **Table 4.9** present the projected commercial service enplanement activity levels for the 2022 ISASP. Included in **Figure 4.7** is also the enplanement data for 2020. While the forecasts were not projected from this year it is included to provide additional context of how the COVID-19 pandemic impacted aviation activity levels, particularly commercial service enplanements. As shown in **Figure 4.7**, the Commercial Service Type Growth Rate and Population Growth Rate methodologies increase at significantly different rates over the planning period, with the population growth rate methodology presenting very little enplanement growth. The **Commercial Service Type Growth Rate Methodology** was selected as the preferred methodology for projecting enplanements because it captured the type of activity these airports are actually currently accommodating based on the type of service they provide and the COVID-19 recovery that the commercial service airports in Indiana are experiencing, as presented in **Section 4.2.1.1.** To supplement the recovery findings presented in **Section 4.2.1.1, Table 4.8** presents the notable enplanement recovery trend seen at Indiana's Primary airports in 2021. As shown, each airport experienced a 55+ percent increase in enplanements in 2021, compared to 2020. This enplanement increase was most significant at Indianapolis International Airport (IND), where a 75 percent enplanement increase was seen in 2021 compared to 2020. While this 2021 data does not account for full recovery as it continues into 2022, it does indicate that commercial service airports are well on their way to full recovery and have begun closing the gap between current and pre-COVID-19 enplanements. On average, 2020 enplanements were 53 percent below pre-COVID-19 levels whereas 2021 enplanements were 23 percent below pre-COVID-19 levels. The Commercial Service Type Growth Rate Methodology resulted in a projected increase of 2,400,560 enplanements over the 20-year planning horizon, associated with a CAGR of 1.8 percent as shown in **Table 4.9**.

Table 4.8. Enplanement Recovery at Indiana's Primary Airports (2019-2021)

Associated City	Airport Name	FAA ID	CY 2019 Enplanements	CY 2020 Enplanements	*2019 - 2020 % Change*	CY 2021 Enplanements	*2020-2021 % Change*	*2019-2021 % Change*
Evansville	Evansville Regional	EVV	242,425	104,883	*-57%*	164,807	*57%*	*-32%*
Fort Wayne	Fort Wayne International	FWA	402,400	213,125	*-47%*	335,804	*58%*	*-17%*
Indianapolis	Indianapolis International	IND	4,709,183	1,989,126	*-58%*	3,487,100	*75%*	*-26%*
South Bend	South Bend International	SBN	416,140	209,214	*-50%*	341,343	*63%*	*-18%*
				Average Percent Change	***-53%***	**N/A**	***63%***	***-23%***

*Notes: 2019 enplanement data differs slightly in this table from the 2019 enplanement base year data in **Table 4.9** because this data is from the FAA Passenger Boarding Data that was made available in 2022, whereas **Table 4.9** references 2020 FAA TAF, which presented estimates of activity. 2021 enplanement data was still considered preliminary at the time of this report. Sources: FAA Passenger Boarding and All-Cargo Data, Preliminary 2021, Final Data 2019-2020, Accessed July, 2022; Kimley-Horn, 2022.*

Figure 4.7. Enplanements Forecast, 2019-2039



Sources: 2020 FAA TAF; FAA Aerospace Forecast, 2019-2039; Woods & Poole, 2021; Kimley-Horn, 2021.

Table 4.9. Enplanements Forecasts, 2019-2039

Airport Information			Base Year	Population Methodology				Commercial Service Type Methodology			
Associated City	Airport Name	FAA ID	2019	2024	2029	2039	CAGR	2024	2029	2039	CAGR
Evansville	Evansville Regional	EVV	240,360	242,640	244,940	249,600	0.2%	260,210	281,710	330,170	1.6%
Fort Wayne	Fort Wayne International	FWA	393,090	402,390	411,910	431,620	0.5%	425,560	460,710	539,970	1.6%
Indianapolis	Indianapolis International	IND	4,689,500	4,745,540	4,802,260	4,917,720	0.2%	5,127,030	5,605,370	6,700,110	1.8%
South Bend	South Bend International	SBN	410,180	413,690	417,230	424,400	0.2%	444,060	480,740	563,440	1.6%
Statewide Totals			**5,733,130**	**5,804,260**	**5,876,340**	**6,023,340**	**0.2%**	**6,256,860**	**6,828,540**	**8,133,690**	**1.8%**

*Notes: 2019 enplanement data differs in this table from the 2019 enplanement base year data in **Table 4.8** because this data is from the 2020 FAA TAF, which presented estimates of activity, whereas **Table 4.7** was developed using FAA Passenger Boarding Data that presents actual activity and was added to this chapter once it was made available. Commercial service enplanements are rounded to the nearest 10. Totals may not sum due to rounding. Sources: 2020 FAA TAF; FAA Aerospace Forecast, 2019-2039; Woods & Poole, 2021; Kimley-Horn, 2021.*

4.5. 2022 ISASP Forecasts Compared to the 2020 FAA TAF

Developing realistic forecasts is important to planning for future system needs, particularly in terms of accommodating changes in aviation activity demands. The forecasts developed for the 2022 ISASP take into consideration historic and current data, as well as confirmed industry trends, to develop forecasts that are specific to activity occurring in Indiana. The FAA requires that airport and system forecasts be compared to the latest available TAF, which was the 2020 FAA TAF for the 2022 ISASP. **Table 4.10** provides a summary of the five- and 10-year projection figures and compares the preferred ISASP forecast methodology results to projections for the same years published in the 2020 FAA TAF. As shown in **Table 4.10.** the preferred methodology for based aircraft projections has a -10 percent variance from the 2020 FAA TAF for the first five years and a -11 percent variance over the ten-year forecast horizon. It is important to note that the variance is negative because 2020 FAA TAF base data is higher than the basedaircraft.com data that was used as the base data for the preferred methodology. Commercial service operations projections have a 12 percent variance from the 2020 FAA TAF within the first five years; however, over the 10-year forecast horizon, the variance decreases to seven percent. Moreover, when looking at total operations, including GA and military, the variance between the 2022 ISASP and 2020 FAA TAF is very small, with a three percent variance for the first five years and a four percent variance for the first 10 years. The preferred methodology for enplanements has an eight percent variance from the 2020 FAA TAF within the first five years and a 14 percent variance over the 10-year forecast horizon.

Table 4.10. Comparison of 2022 ISASP and 2020 FAA TAF Forecast Results for the First 10 Years

Forecast Element	2024 (Five-Year Forecast)			2029 (10-Year Forecast)		
	Preferred Methodology	TAF	TAF Variance	Preferred Methodology	TAF	TAF Variance
Based Aircraft	2,926	3,326	-10%	3,062	3,385	-11%
GA Operations at all Facilities	1,157,640	1,144,820	1%	1,210,940	1,172,790	3%
Commercial Service Operations	239,050	209,660	12%	261,970	242,880	7%
Military Operations*	23,580	23,990	3%	23,580	23,990	3%
Total Operations	1,420,270	1,377,470	3%	1,496,490	1,438,660	4%
Enplanements	6,256,860	5,733,130	8%	6,828,540	5,844,470	14%

*Notes: Military operations reported as the preferred methodology differ from 2020 FAA TAF numbers because non-NPIAS facilities are not included in the TAF projections. Operations and enplanement data have been rounded to the nearest 10. Totals may not sum due to rounding. *2020 FAA TAF military operations were flatlined through the projection period. Sources: 2020 FAA TAF; Kimley-Horn, 2021.*

4.6. Summary

The 2022 ISASP aviation activity forecasts were developed to identify reasonable projections of demand changes within the Indiana system over the 20-year planning horizon. Forecasts of operations and enplanements were projected using 2019 as the base year and based aircraft projections were determined using 2021 as the base year. 2019 was used to represent a typical year of aviation activity, while based aircraft data was provided as "current" in 2021. 2020 was not selected as the base year for any of the activity forecasts considering the impacts of COVID-19; however, 2020 data was presented for context in the based aircraft, operations, and enplanements forecasts to show the activity decline that occurred as a result of the COVID-19 pandemic. The preferred aviation forecasts developed for the 2022 ISASP are similar to the 2020 FAA TAF.

4.7. Historic Based Aircraft and Operations Data

Table 4.11. Historic Based Aircraft Data for System Facilities

Associated City	Airport Name	FAA ID	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Commercial Service													
Evansville	Evansville Regional	EVV	64	63	63	59	55	57	63	63	56	54	47
Fort Wayne	Fort Wayne International	FWA	66	59	59	55	51	56	51	46	48	49	46
Indianapolis	Indianapolis International	IND	69	64	78	55	42	38	36	41	40	54	83
South Bend	South Bend International	SBN	48	48	55	58	64	65	66	73	80	89	83
GA													
Anderson	Anderson Municipal-Darlington Field	AID	79	80	77	85	81	73	72	75	74	72	67
Angola	Tri-State Steuben County	ANQ	40	35	34	38	39	37	41	39	37	38	37
Auburn	DeKalb County	GWB	66	67	63	64	67	63	66	73	75	69	67
Bedford	Virgil I Grissom Municipal	BFR	31	29	27	28	29	28	25	25	24	32	32
Bloomington	Monroe County	BMG	98	105	113	108	117	111	109	97	93	85	86
Brazil	Brazil Clay County	0I2	16	18	17	17	14	15	15	17	15	23	20
Columbus	Columbus Municipal	BAK	73	76	78	73	67	67	70	83	79	77	74
Connersville	Mettel Field	CEV	12	11	13	7	8	8	7	8	9	9	10
Crawfordsville	Crawfordsville Regional	CFJ	33	33	31	34	31	34	29	27	29	28	24
Delphi	Delphi Municipal	1I9	27	26	25	27	26	24	26	23	20	23	26

Associated City	Airport Name	FAA ID	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Elkhart	Elkhart Municipal	EKM	111	111	123	119	146	147	157	133	130	102	97
Fort Wayne	Smith Field	SMD	52	56	60	56	57	55	58	57	60	62	59
Frankfort	Frankfort Municipal	FKR	17	20	23	20	21	21	23	21	22	19	20
French Lick	French Lick Municipal	FRH	12	12	9	12	14	9	12	11	7	10	13
Gary	Gary/Chicago International	GYY	96	99	92	96	85	97	100	98	85	72	60
Goshen	Goshen Municipal	GSH	61	65	63	68	62	67	64	64	58	63	64
Greencastle	Putnam County Regional	GPC	27	30	30	37	30	28	30	31	28	22	29
Greensburg	Greensburg Municipal	I34	43	45	45	46	46	46	48	47	46	44	44
Griffith	Griffith-Merrillville	05C	63	65	66	64	66	62	57	58	59	54	61
Huntingburg	Huntingburg	HNB	24	29	27	27	34	35	39	33	34	35	32
Huntington	Huntington Municipal	HHG	70	77	77	79	81	78	84	77	71	69	61
Indianapolis	Eagle Creek Airpark	EYE	110	115	122	126	121	127	107	99	104	102	86
Indianapolis	Hendricks County-Gordon Graham Field	2R2	52	49	58	58	58	60	44	50	57	62	54
Indianapolis	Indianapolis Downtown Heliport	8A4	8	8	6	5	5	4	4	6	5	5	4
Indianapolis	Indianapolis Executive	TYQ	70	69	69	64	81	77	75	67	69	78	85
Indianapolis	Indianapolis Metropolitan	UMP	116	114	124	127	142	144	140	118	113	123	128
Indianapolis	Indianapolis Regional	MQJ	147	146	140	134	138	135	124	114	114	125	124
Indianapolis	Indy South Greenwood	HFY	112	97	95	97	107	111	109	100	97	84	83
Jeffersonville	Clark Regional	JVY	134	128	129	120	119	119	109	108	104	104	120
Kendallville	Kendallville Municipal	C62	45	48	42	43	40	41	41	39	38	38	38

Associated City	Airport Name	FAA ID	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Kendtland	Kentland Municipal	50I	18	16	15	15	13	10	11	12	12	10	10
Knox	Starke County	OXI	21	22	25	24	20	22	24	27	28	27	31
Kokomo	Kokomo Municipal	OKK	56	52	51	49	53	48	51	42	54	59	49
Lafayette	Purdue University	LAF	96	95	93	90	90	93	87	85	83	80	82
La Porte	La Porte Municipal	PPO	74	73	65	67	69	66	67	68	72	65	66
Lebanon	Boone County	6I4	33	36	37	31	33	34	30	29	35	32	28
Logansport	Logansport/Cass County	GGP	13	15	19	18	18	16	16	14	13	13	17
Madison	Madison Municipal Airport	IMS	58	61	55	58	57	55	51	49	54	51	51
Marion	Marion Municipal	MZZ	61	61	61	61	60	58	53	50	48	49	45
Michigan City	Michigan City Municipal-Phillips Field	MGC	44	46	38	39	40	40	42	47	45	44	41
Monticello	White County	MCX	27	27	21	21	24	26	21	20	20	22	25
Muncie	Delaware County Regional	MIE	35	33	30	26	23	21	22	20	25	30	25
New Castle	New Castle Henry County Marlatt Field	UWL	24	25	25	22	21	23	25	24	20	20	22
North Vernon	North Vernon	OVO	38	35	29	33	39	40	40	37	36	35	31
Paoli	Paoli Municipal	I42	21	26	23	21	22	24	21	20	19	17	17
Peru	Grissom ARB	GUS	-	-	-	-	10	11	11	10	9	1	1
Peru	Peru Municipal	I76	17	16	18	17	16	16	18	17	18	18	18
Plymouth	Plymouth Municipal	C65	22	25	28	24	24	19	19	16	17	22	18
Portland	Portland Municipal	PLD	23	21	20	18	16	17	19	12	17	10	13
Rensselaer	Jasper County	RZL	24	24	25	24	26	25	22	20	21	19	17

Associated City	Airport Name	FAA ID	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Richmond	Richmond Municipal	RID	31	35	34	34	35	34	34	30	31	33	26
Rochester	Fulton County	RCR	17	17	17	17	15	13	11	10	12	12	14
Salem	Salem Municipal	I83	44	42	39	39	40	46	42	41	41	35	25
Seymour	Freeman Municipal	SER	65	63	59	63	54	52	52	50	59	62	63
Shelbyville	Shelbyville Municipal	GEZ	66	57	66	72	74	73	66	64	71	74	71
Sheridan	Sheridan	5I4	38	39	36	38	38	36	30	34	33	33	31
Sullivan	Sullivan County	SIV	35	33	32	31	35	36	34	30	32	24	25
Tell City	Perry County Municipal	TEL	10	10	11	11	12	13	13	14	14	12	13
Terre Haute	Terre Haute Regional	HUF	54	54	53	53	68	72	70	69	65	66	68
Valparaiso	Porter County Regional	VPZ	162	169	164	164	158	160	151	150	156	153	145
Wabash	Wabash Municipal	IWH	18	17	18	18	18	17	16	15	15	11	11
Warsaw	Warsaw Municipal	ASW	55	57	55	52	55	58	59	58	56	52	42
Washington	Daviess County	DCY	30	31	31	31	32	33	33	35	31	31	30
Winamac	Arens Field	RWN	9	9	10	11	10	10	7	7	7	8	8
Winchester	Randolph County	I22	12	11	9	11	10	10	12	12	12	10	8
Statewide Totals			**3,443**	**3,450**	**3,445**	**3,409**	**3,472**	**3,466**	**3,381**	**3,259**	**3,261**	**3,215**	**3,151**

Source: INDOT State Based Aircraft Registration Data, 2009-2019; Kimley-Horn, 2022

Table 4.12. Historic Operations Data for System Facilities, 2009-2019

Associated City	Airport Name	FAA ID	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Commercial Service													
Evansville	Evansville Regional	EVV	63,559	56,190	45,740	41,434	48,442	29,311	35,727	30,987	33,241	31,480	41,554
Fort Wayne	Fort Wayne International	FWA	53,973	40,731	38,358	40,427	36,845	34,794	36,098	36,140	37,446	38,518	41,818
Indianapolis	Indianapolis International	IND	171,322	166,490	159,699	158,237	154,040	151,119	154,059	162,294	160,122	168,250	190,648
South Bend	South Bend International	SBN	40,235	37,100	37,122	37,411	36,119	36,550	38,043	41,198	41,603	43,648	47,756
GA													
Anderson	Anderson Municipal-Darlington Field	AID	16,631	16,842	20,914	23,087	22,000	12,599	12,426	12,944	19,897	19,359	18,015
Angola	Tri-State Steuben County	ANQ	22,257	19,475	18,918	21,144	21,700	5,653	6,264	5,959	9,604	9,864	9,604
Auburn	DeKalb County	GWB	21,013	21,331	12,824	13,028	13,639	11,672	12,228	13,525	13,899	12,787	12,416
Bedford	Virgil I Grissom Municipal	BFR	5,110	4,780	4,451	4,491	4,651	4,491	3,396	3,396	3,260	5,858	5,858
Bloomington	Monroe County	BMG	26,690	25,748	25,310	22,270	23,894	26,906	32,275	24,251	26,402	29,150	31,718
Brazil	Brazil Clay County	0I2	5,082	5,957	5,626	5,626	6,682	7,159	7,159	3,464	3,056	4,687	2,034
Columbus	Columbus Municipal	BAK	36,169	33,430	36,516	40,364	37,708	37,242	41,492	43,757	44,212	47,965	54,397
Connersville	Mettel Field	CEV	8,772	8,041	5,721	3,081	3,521	5,372	4,701	5,372	7,445	7,445	8,272
Crawfordsville	Crawfordsville Regional	CFJ	9,563	9,563	8,983	7,001	6,383	7,001	5,971	4,869	5,229	5,049	22,922
Delphi	Delphi Municipal	1I9	6,809	8,441	8,116	8,765	5,612	5,180	5,612	6,776	5,892	6,776	6,886
Elkhart	Elkhart Municipal	EKM	17,453	22,035	21,181	24,415	24,100	26,706	28,159	27,124	32,142	34,144	31,395
Fort Wayne	Smith Field	SMD	20,913	22,522	17,917	16,723	17,021	18,993	20,029	19,684	20,016	20,683	19,682
Frankfort	Frankfort Municipal	FKR	14,300	15,217	17,500	15,217	12,449	12,449	13,635	11,381	11,922	10,297	19,181
French Lick	French Lick Municipal	FRH	10,598	10,083	7,562	10,083	11,764	4,754	5,795	5,312	3,380	2,282	2,967
Gary	Gary/Chicago International	GYY	36,411	33,613	28,237	28,752	22,212	22,029	25,229	25,844	23,526	25,226	24,465
Goshen	Goshen Municipal	GSH	25,998	27,702	26,850	28,981	26,424	28,555	27,276	14,095	12,773	13,875	21,397
Greencastle	Putnam County Regional	GPC	12,381	13,757	13,757	9,013	7,308	6,821	3,463	3,578	3,232	2,641	3,481
Greensburg	Greensburg Municipal	I34	9,553	12,892	12,892	13,179	8,375	8,375	8,739	2,760	2,701	2,584	3,500
Griffith	Griffith-Merrillville	05C	30,943	31,925	32,417	37,462	38,632	36,291	33,364	21,868	22,245	20,360	28,705
Huntingburg	Huntingburg	HNB	-	-	-	-	-	-	10,151	9,461	9,797	10,000	11,190
Huntington	Huntington Municipal	HHG	19,105	17,901	21,189	21,189	14,352	14,847	10,888	12,436	14,177	15,421	13,431
Indianapolis	Eagle Creek Airpark	EYE	9,254	11,170	10,400	10,400	11,929	12,280	13,683	9,061	9,335	9,610	7,291
Indianapolis	Hendricks County-Gordon Graham Field	2R2	18,250	20,075	16,611	17,043	17,474	7,904	8,512	7,803	5,211	5,064	4,477
Indianapolis	Indianapolis Downtown Heliport	8A4	31,788	33,233	35,256	30,728	29,508	30,971	21,879	20,243	21,265	20,874	22,136
Indianapolis	Indianapolis Executive	TYQ	33,820	21,032	20,598	21,032	29,499	30,602	30,050	27,569	32,269	27,944	27,612
Indianapolis	Indianapolis Metropolitan	UMP	3,392	3,392	2,544	2,120	2,120	1,696	1,696	2,544	2,120	2,120	1,696
Indianapolis	Indianapolis Regional	MQJ	31,994	31,442	34,200	35,869	40,105	40,670	29,174	24,590	23,547	21,950	22,842
Indianapolis	Indy South Greenwood	HFY	49,978	49,639	47,599	45,559	35,633	34,858	32,018	31,009	31,009	34,001	47,648
Jeffersonville	Clark Regional	JVY	31,906	31,450	31,450	29,171	38,323	36,430	35,484	31,699	33,940	38,367	41,810
Kendallville	Kendallville Municipal	C62	71,106	67,922	48,164	44,803	44,430	44,430	44,086	43,682	42,063	46,168	53,271
Kendtland	Kentland Municipal	50I	5,623	5,998	5,248	5,459	5,078	4,711	4,711	4,481	6,078	6,078	6,078

Associated City	Airport Name	FAA ID	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Knox	Starke County	OXI	7,022	6,242	5,852	5,852	6,577	5,059	5,565	6,693	6,693	5,578	3,778
Kokomo	Kokomo Municipal	OKK	13,104	13,728	15,600	20,873	17,394	19,133	18,983	21,356	22,146	21,355	24,520
Lafayette	Purdue University	LAF	12,146	11,278	11,061	10,628	12,214	11,062	11,753	13,505	17,363	18,971	16,990
La Porte	La Porte Municipal	PPO	99,862	95,690	92,975	97,285	91,125	96,403	95,453	99,391	109,620	114,966	118,268
Lebanon	Boone County	6I4	19,680	19,414	17,287	17,819	18,351	17,553	8,453	13,116	13,887	12,537	15,774
Logansport	Logansport/Cass County	GGP	9,729	4,828	4,962	4,157	4,426	4,401	3,883	3,754	2,813	2,572	2,250
Madison	Madison Municipal Airport	IMS	7,127	8,223	8,345	7,906	7,906	4,355	4,355	3,811	5,977	5,977	7,816
Marion	Marion Municipal	MZZ	16,054	10,596	9,554	10,075	7,975	7,695	7,135	8,428	9,288	8,772	15,650
Michigan City	Michigan City Municipal-Phillips Field	MGC	11,943	11,943	11,943	10,456	10,285	9,942	8,972	8,464	8,125	11,840	10,873
Monticello	White County	MCX	10,555	11,035	9,116	8,218	8,429	8,429	8,091	9,054	8,668	6,831	6,365
Muncie	Delaware County Regional	MIE	13,662	13,662	13,966	13,966	15,961	12,400	10,015	9,538	6,791	7,470	8,489
New Castle	New Castle Henry County Marlatt Field	UWL	20,969	22,520	23,035	25,875	27,482	27,100	31,220	34,234	31,811	32,825	35,233
North Vernon	North Vernon	OVO	5,854	8,861	8,861	7,798	5,762	6,311	6,860	2,714	2,261	2,261	4,804
Paoli	Paoli Municipal	I42	8,439	7,773	6,440	8,502	10,048	10,706	10,706	9,533	9,954	9,678	8,572
Peru	Grissom ARB	GUS	2,512	3,110	2,751	2,512	2,632	1,927	1,686	1,606	2,337	2,091	2,091
Peru	Peru Municipal	I76	5,514	5,190	2,697	2,547	2,397	1,345	1,513	1,429	2,546	2,546	2,546
Plymouth	Plymouth Municipal	C65	5,830	6,625	7,420	10,588	10,588	8,382	8,382	7,636	8,113	10,500	13,013
Portland	Portland Municipal	PLD	7,737	5,542	5,278	4,750	4,189	4,451	4,974	2,700	3,825	2,250	2,593
Rensselaer	Jasper County	RZL	4,820	4,820	7,407	7,111	7,703	6,012	5,291	4,810	9,542	8,633	7,724
Richmond	Richmond Municipal	RID	19,898	11,077	10,761	10,761	9,486	9,215	9,215	18,227	14,720	15,670	12,346
Rochester	Fulton County	RCR	17,088	17,088	17,088	17,088	15,077	10,267	8,687	7,898	13,382	13,382	15,612
Salem	Salem Municipal	I83	7,832	7,476	7,667	7,667	7,864	5,984	5,464	5,334	5,333	4,553	3,252
Seymour	Freeman Municipal	SER	13,260	12,852	12,036	12,852	11,832	11,394	11,394	17,616	20,786	21,844	17,187
Shelbyville	Shelbyville Municipal	GEZ	21,043	18,173	21,043	22,956	19,431	19,168	17,330	16,430	18,227	18,997	21,876
Sheridan	Sheridan	5I4	13,009	13,352	12,325	8,633	8,633	8,178	3,795	4,301	3,795	3,916	3,679
Sullivan	Sullivan County	SIV	4,137	3,901	3,782	5,814	6,564	6,752	5,701	5,030	5,365	3,303	3,441
Tell City	Perry County Municipal	TEL	7,951	7,951	3,195	3,195	3,485	2,108	2,108	2,270	3,490	2,991	3,241
Terre Haute	Terre Haute Regional	HUF	40,068	57,784	40,651	35,648	37,870	48,797	65,283	50,702	50,444	58,469	62,447
Valparaiso	Porter County Regional	VPZ	67,392	70,304	68,224	40,033	38,568	39,056	37,985	37,733	39,242	38,488	66,805
Wabash	Wabash Municipal	IWH	7,370	6,960	4,428	4,428	4,428	4,182	6,553	6,143	6,143	4,505	4,505
Warsaw	Warsaw Municipal	ASW	27,258	18,612	17,959	16,980	17,960	18,939	15,173	14,916	14,401	13,373	15,260
Washington	Daviess County	DCY	5,633	5,820	5,820	2,785	2,875	2,965	3,225	3,420	3,029	2,896	2,803
Winamac	Arens Field	RWN	4,504	4,504	5,004	5,505	1,732	1,732	1,212	1,049	1,049	1,200	5,175
Winchester	Randolph County	I22	7,226	6,624	5,420	6,276	5,706	5,706	6,847	4,769	4,769	2,078	1,662
	Statewide Totals		**1,189,090**	**1,170,166**	**1,098,903**	**1,073,589**	**1,045,480**	**1,004,755**	**992,809**	**938,146**	**987,579**	**1,011,947**	**1,133,018**

Source: INDOT Acoustical Counter Program, 2009-2019; Kimley-Horn, 2022.