



MAY 2018



2016 AIRCRAFT OPERATIONS COUNTING PROGRAM

CHESTER COUNTY

PENNRIDGE

QUAKERTOWN

03-42-0125-016-2015



The Delaware Valley Regional Planning Commission is the federally designated Metropolitan Planning Organization for a diverse nine-county region in two states: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey.



DVRPC's vision for the Greater Philadelphia Region is a prosperous, innovative, equitable, resilient, and sustainable region that increases mobility choices by investing in a safe and modern transportation system; that protects and preserves our natural resources while creating healthy communities; and that fosters greater opportunities for all.

DVRPC's mission is to achieve this vision by convening the widest array of partners to inform and facilitate data-driven decision-making. We are engaged across the region, and strive to be leaders and innovators, exploring new ideas and creating best practices.

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DVRPC is funded through a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for the findings and conclusions herein, which may not represent the official views or policies of the funding agencies.

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Executive Summary

The Delaware Valley Regional Planning Commission (DVRPC) has conducted aircraft operations counts at the non-towered airports in the 12-county, four-state Delaware Valley Regional Airport System Plan area (RASP) since 1986 (see Figure ES-1). In 2015, the Federal Aviation Administration (FAA) continued funding this program to include four of the 20 non-towered facilities (all general aviation airports and all reliever airports except Northeast Philadelphia are non-towered). From January 2016 to December 2016, the following airports were surveyed: Chester County, New Garden, Pennridge, and Quakertown in Pennsylvania. Due to construction impacts, New Garden counts will be deferred to the 2017 cycle.

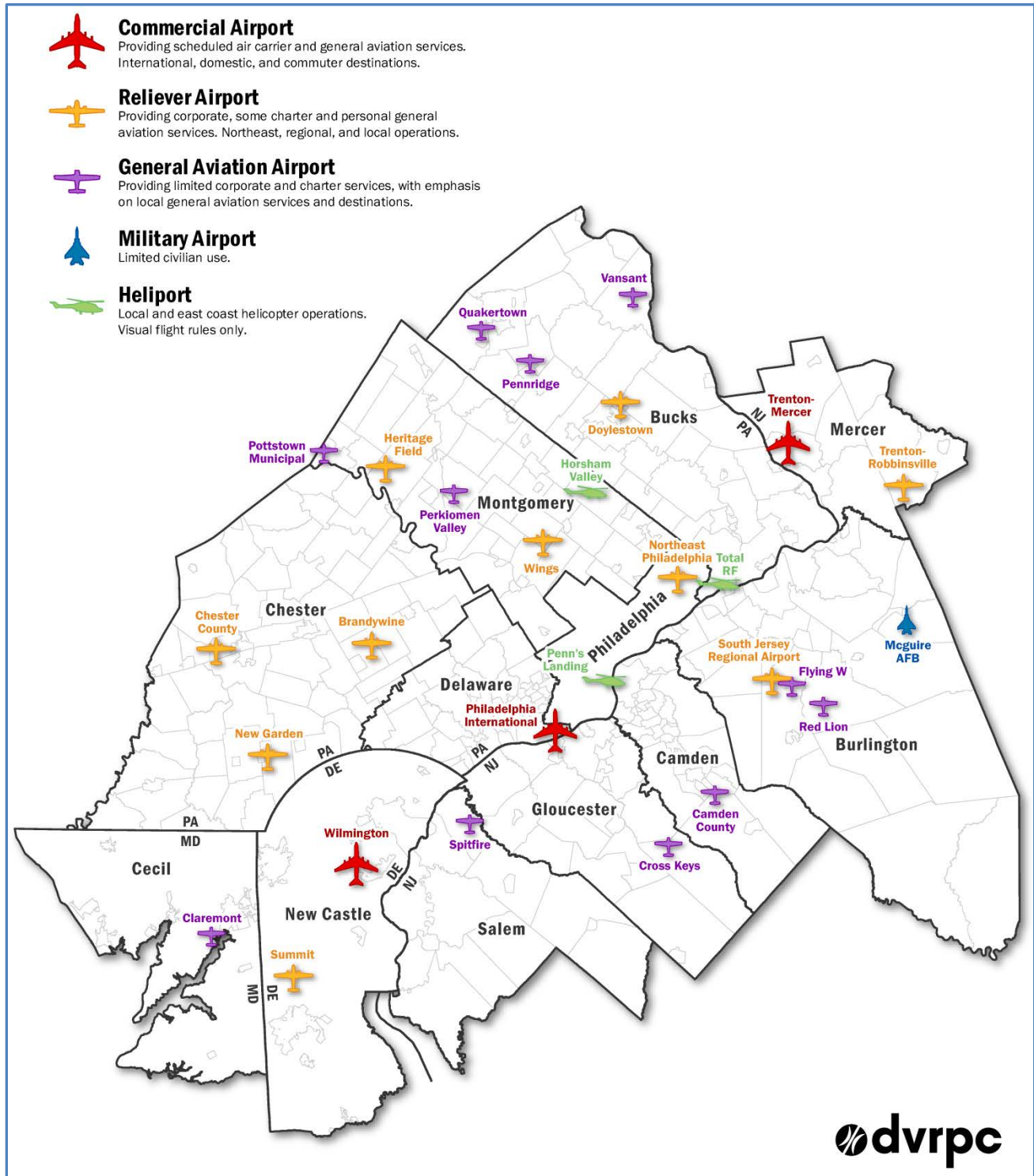
This report uses the Larson Davis Laboratories Acoustic Counter Software to monitor takeoff data at each airport for eight weeks apportioned throughout the year. This data is reviewed and compiled into Airport Activity Reports. The Airport Activity Reports are then used to project seasonal and annual takeoff and landing totals, as estimated by DVRPC counting software, for each surveyed airport during 2016.

In the 2016 counting period, there were 72,371 annual aircraft operations estimated for the three regional airports. The DVRPC report for the same three airports in the previous counting programs had 82,613 annual aircraft operations, which indicates a 12.4 percent decrease in total operations over the previous periods. The decrease was primarily the result of continued high aviation fuel charges, national economic conditions, and a decline in training operations for new pilots.

Historically DVRPC has counted airports in three fixed sets of airports, cycling one set each year in a series. Each counting period could have an airport counted out of sequence, at the request of our sponsors, but this was a rare event and the airport selected usually went back into its normal sequence for the next count. However, with the change in the FAA only funding the counting of National Plan of Integrated Airport Systems airports, we have had to drop the counting of many of our RASP airports and reset the counting sequence for the remaining airports. This has resulted in the current count cycle having different years of historic comparison for the various airports.

Historic counting data since 1986 is available through the DVRPC Office of Freight and Aviation Planning website at www.dvrpc.org/Aviation/AircraftTrafficCounts/.

Figure ES-1: Delaware Valley Regional Airport System



Annual Operations Summaries

As an integral part of its ongoing aviation planning efforts, DVRPC has conducted aircraft operations counts at non-towered airports in the region since 1986. In 2015, the FAA continued funding this program to include four of 20 DVRPC RASP facilities. From January 2016 to December 2016, the following airports were surveyed: Chester, Pennridge, and Quakertown in Pennsylvania. Due to construction impacts, New Garden counts will be deferred to the 2017 cycle.

The Annual Operations Summaries provide tabular and graphical displays of annual aircraft operations for fixed-wing aircraft, helicopters, and their combined totals (see pp. 4–6). The data is projected based on the daily flight counts collected during eight one-week sampling periods throughout the year.

The following procedure is applied to all counts during the entire program. Eight one-week counting surveys are taken over the course of one year. These counting surveys are scheduled twice each season at four- to six-week intervals for each airport. Keeping the intervals between setting and resetting of the counters at each airport as consistent as possible ensures the most accurate statistical operations estimate. At the start of each interval, a DVRPC staff member selects a location near the airport runway to base an LDL 820 Sound Level Meter. The meter is activated by set minimum noise levels only during aircraft takeoff activity. The data collected is saved to the LDL 820 memory, and the staff member retrieves the meter after each week of counts.

After equipment retrieval, the data is downloaded to the Aircraft Counting System software and then checked manually for event-related errors. The Aircraft Counting System report displays weekly aircraft takeoffs (since most propeller landings are nearly silent) by hour and day for each week counted. Finally, the data is entered into and extrapolated by DVRPC counting formulas, which estimate seasonal and annual total takeoffs and landings.

In the 2016 counting period, there were 72,371 annual aircraft operations estimated for the three regional airports. The DVRPC report for the same three airports in the previous counting programs had 82,613 annual aircraft operations, which indicates a 12.4 percent decrease in total operations over the previous period.

Annual Aircraft Operations

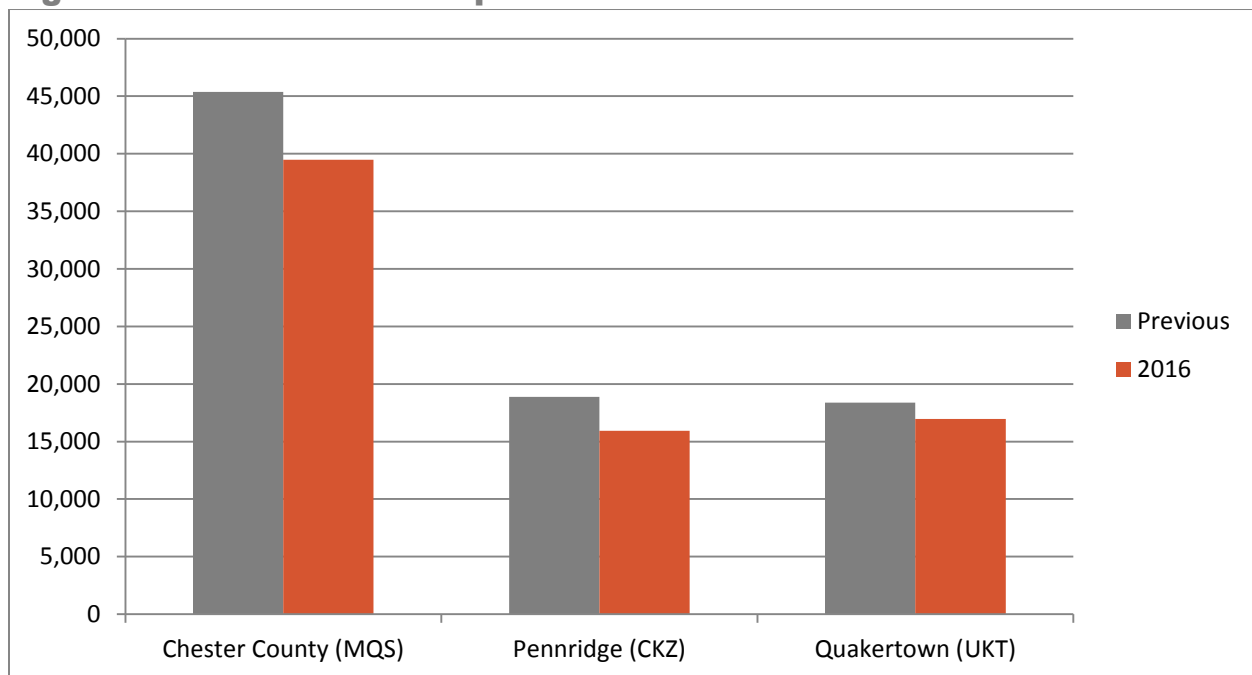
Table 1: Annual Aircraft Operations Previous Count versus 2016 Count

Airport	Previous Operations ^a	2016 Operations	Absolute Change	Percentage Change
Chester County (MQS)	45,362	39,483	-5,879	-13.0%
Penridge (CKZ)	18,869	15,925	-2,944	-15.6%
Quakertown (UKT)	18,382	16,963	-1,419	-7.7%
Total Operations	82,613	72,371	-10,242	-12.4%

Source: DVRPC

^a Previous operations period for Chester County is 2014/15; all other airports are 2013/14.

Figure 1: Annual Aircraft Operations Previous Count versus 2016 Count



Source: DVRPC

Annual Fixed-Wing Operations

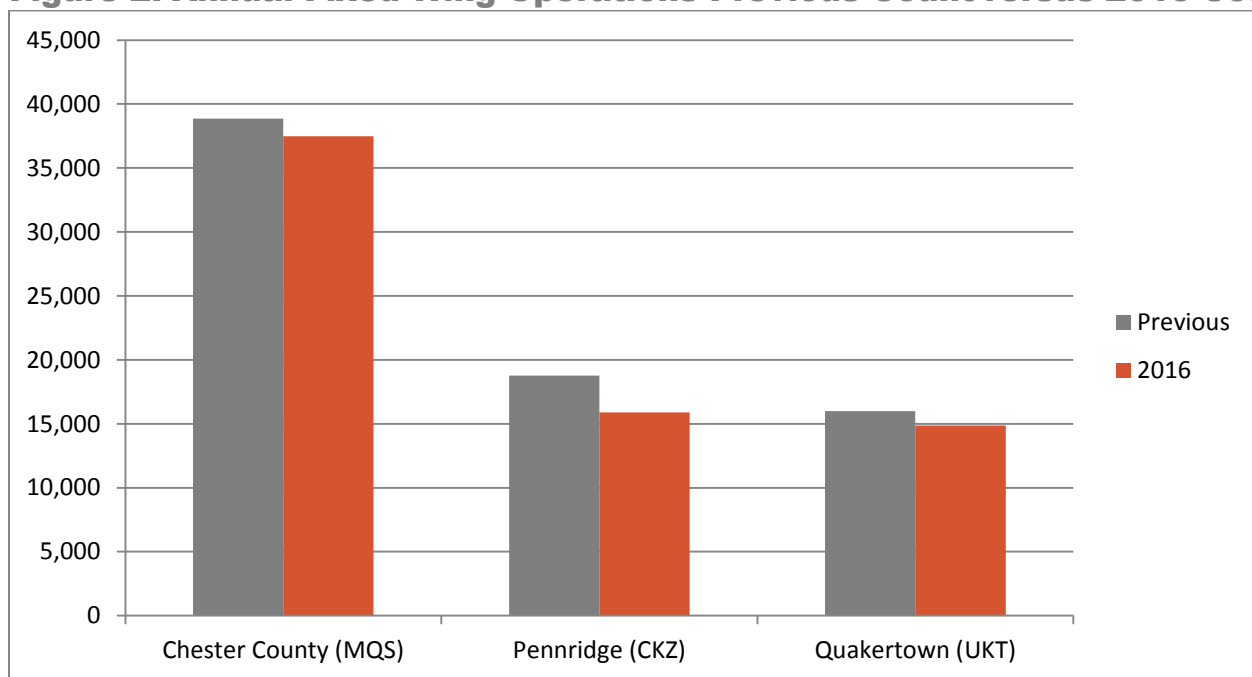
Table 2: Annual Fixed-Wing Operations Previous Count versus 2016 Count

Airport	Previous Operations ^a	2016 Operations	Absolute Change	Percentage Change
Chester County (MQS)	38,870	37,487	-1,383	-3.6%
Penncast (CKZ)	18,765	15,901	-2,864	-15.3%
Quakertown (UKT)	15,982	14,863	-1,119	-7.0%
Total Operations	73,617	68,251	-5,366	-7.3%

Source: DVRPC

^a Previous operations period for Chester County is 2014/15; other airports are 2013/14.

Figure 2: Annual Fixed-Wing Operations Previous Count versus 2016 Count



Source: DVRPC

Annual Helicopter Operations

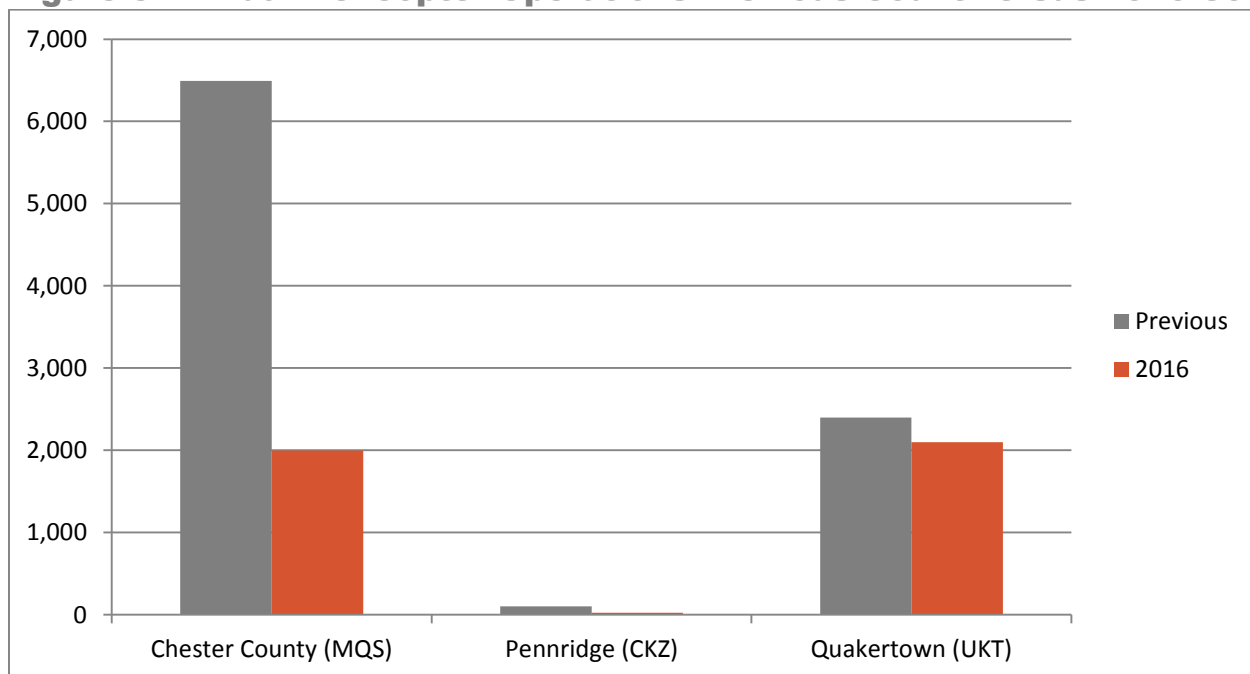
Table 3: Annual Helicopter Operations Previous Count versus 2016 Count

Airport	Previous Operations ^a	2016 Operations	Absolute Change	Percentage Change
Chester County (MQS)	6,492	1,996	-4,496	-69.3%
Penridge (CKZ)	104	24	-80	-76.9%
Quakertown (UKT)	2,400	2,100	-300	-12.5%
Total Operations	8,996	4,120	-4,876	-54.2%

Source: DVRPC

^a Previous operations period for Chester County is 2014/15; other airports are 2013/14.

Figure 3: Annual Helicopter Operations Previous Count versus 2016 Count



Source: DVRPC

Airport Activity Reports

This section of the report displays the weekly activity data collected during the eight one-week counting surveys conducted for each of the three individual airports. Each airport summary provides a brief narrative along with an inventory of based aircraft. The based aircraft data is provided by airport management. When DVRPC has been unable to obtain this information directly from airport management, we have used data from FAA Form 5010, Airport Master Record, available on AirNav.com for the particular airport.

Airport activity summaries list estimated annual flight operations and a seasonal operations chart. Daily takeoffs collected from each airport are displayed in spreadsheet format by season, date, and time of day. All weekly activity data pages express only aircraft takeoffs and do not include the landing phase of flight due to the near silence of propeller landings. At the bottom of each weekly activity data page, subtotals of aircraft activity are also expressed as takeoffs only. In the activity summary, at the beginning of each Airport Activity Report, takeoffs are converted into estimated annual and seasonal operations, which include takeoffs and landings by the DVRPC counting software.

Helicopter data is not collected by the Acoustic Counter Software devices but is prorated from the annual estimate given by the airport operator at the completion of the counting cycle, and it is only expressed as a subtotal for each day.

Chester County Airport (MQS)

Chester County

Coatesville, PA 19320

Runway Orientation: 11/29

Runway Length: 5,400 ft.

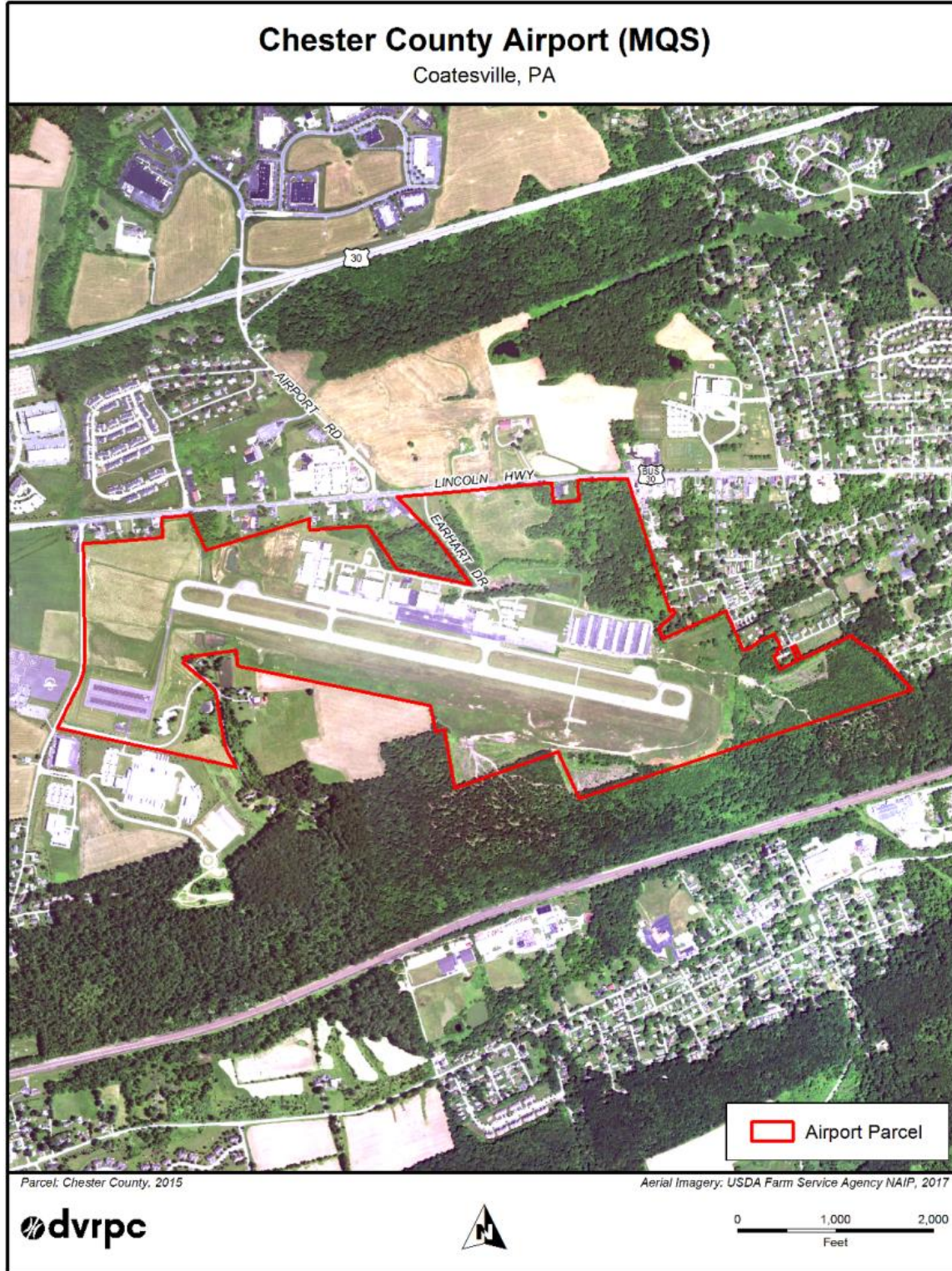
Table 4: Chester County Airport (MQS) Based Aircraft

Based Aircraft Fleet Mix	
Single-Engine	57
Multi-Engine	13
Jet	17
Helicopter	0
Glider	0
Total	87

Source: AirNav.com

Chester County G. O. Carlson Airport contains 87 fixed-wing based aircraft. It is a public airport two miles west of Coatesville and is owned by the Chester County Area Airport Authority.

Figure 4: Chester County Airport (MQS) Aerial Photo



DVRPC Aircraft Counting Program

Airport: Chester County Airport (MQS)

County: Chester

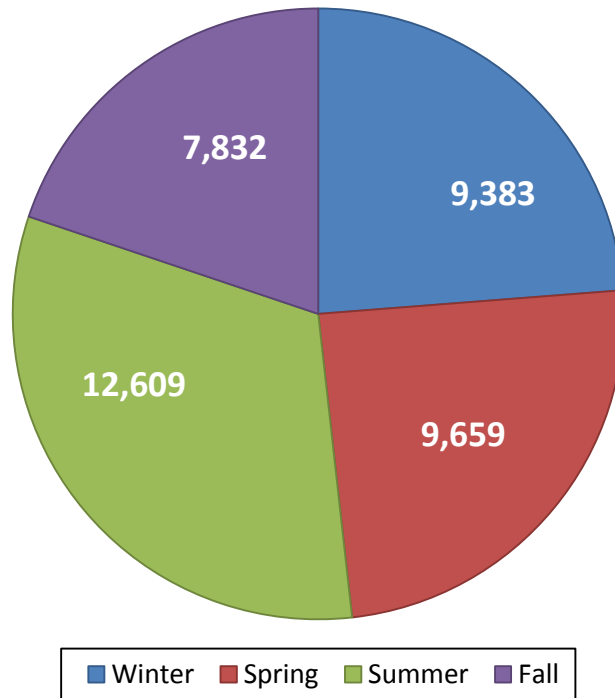
Table 5: Chester County Airport (MQS) Annual Summary

Season	Year	Average Daily Operations	Total Operations	Percentage of Annual Operations
Winter	2016	105.43	9,383	24%
Spring	2016	103.86	9,659	24%
Summer	2016	134.14	12,609	32%
Fall	2016	88.00	7,832	20%
Annual Operations:	2016		39,483	

Margin of Error: 12 at 95 percent confidence

Source: DVRPC

Figure 5: Chester County Airport (MQS) Seasonal Summary



Source: DVRPC

Weekly Activity Report
 MQS Chester County
 Airport
 MQS Winter I 2016

For: 02 February 2016 - 08 February 2016

Day->	Tues 2-Feb	Wed 3-Feb	Thurs 4-Feb	Fri 5-Feb	Sat 6-Feb	Sun 7-Feb	Mon 8-Feb
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							1
7 am	1	1		1	2	1	2
8 am		2		3	9	6	1
9 am	3	1	5	1	6	7	1
10 am	1		1	2	10	5	2
11 am		1		1	10	9	3
12 pm	2		2	1	7	11	
1 pm	8		1		11	14	1
2 pm	5		2	2	9	20	14
3 pm	5		1	2	9	14	9
4 pm	2	1	1		7	3	8
5 pm	3	1		2	5	3	5
6 pm	2				2	1	3
7 pm	1		3		2	3	2
8 pm	9		1	1			
9 pm				1			1
10 pm					1		
11 pm					1		
Prorated Daily Helio Activity	3	2	2	3	3	3	3
Total Daily Aircraft Takeoffs	45	9	19	20	94	100	56
Prorated Total Helio Activity	19						
Total Fixed-Wing Activity	324						
Total Aircraft Takeoffs	343						

Source: DVRPC

Weekly Activity Report
 MQS Chester County
 Airport
 MQS Winter II 2016

For: 03 March 2016 - 09 March 2016

Day->	Thurs 3-Mar	Fri 4-Mar	Sat 5-Mar	Sun 6-Mar	Mon 7-Mar	Tues 8-Mar	Wed 9-Mar
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am	1				1	1	3
7 am	1		1			3	3
8 am	3		2	1	1	2	1
9 am	3	1	4	4	2		2
10 am	4	1	16	6		11	3
11 am	2	1	8	11	1	5	4
12 pm	2	2	13	8	11	4	6
1 pm	7	1	5	4	5	5	10
2 pm	4		16	19	3	5	1
3 pm	3	1	7	11	6	5	6
4 pm	2	2	3	5	2	5	9
5 pm	8	3	2	5		6	1
6 pm	3	1	2		2	4	3
7 pm	15			3	1		
8 pm			2		1		1
9 pm							
10 pm			2				
11 pm							
Prorated Daily Helio Activity	3	2	3	3	2	3	3
Total Daily Aircraft Takeoffs	61	15	86	80	38	59	56
Prorated Total Helio Activity	19						
Total Fixed-Wing Activity	376						
Total Aircraft Takeoffs	395						

Source: DVRPC

Weekly Activity Report
 MQS Chester County
 Airport
 MQS Spring I 2016

For: 14 May 2016 - 20 May 2016

Day->	Sat 14-May	Sun 15-May	Mon 16-May	Tues 17-May	Wed 18-May	Thurs 19-May	Fri 20-May
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am		2		3			1
7 am	3		2	1	1	1	1
8 am	5	2	3	4	2	2	2
9 am	17	2	3	8	5	5	4
10 am	10	2	3	6	10	8	1
11 am	14	7	5	3	8	8	7
12 pm	6		3	2	11	7	
1 pm	3		2		3	5	
2 pm	3	2			10	4	
3 pm		1	1		3	5	
4 pm		1	3	3	6	5	
5 pm		3		2	7	15	
6 pm		1	1	3	14	3	
7 pm	1	1		1	2	4	
8 pm		2	1	1	2	6	
9 pm	1		3	2	1	1	
10 pm				1		3	
11 pm							
Prorated Daily Helio Activity	3	2	3	3	3	3	2
Total Daily Aircraft Takeoffs	66	28	33	43	88	85	18
Prorated Total Helio Activity	19						
Total Fixed-Wing Activity	342						
Total Aircraft Takeoffs	361						

Source: DVRPC

Weekly Activity Report
 MQS Chester County
 Airport
 MQS Spring II 2016

For: 08 June 2016 - 14 June 2016

Day->	Wed 8-Jun	Thurs 9-Jun	Fri 10-Jun	Sat 11-Jun	Sun 12-Jun	Mon 13-Jun	Tues 14-Jun
12 am		2					
1 am							
2 am							
3 am							
4 am							
5 am				2	1		
6 am	1					2	
7 am		1		3	1	2	1
8 am	1	2	2	3		3	
9 am	8	2	2	14	2	1	9
10 am	7	6	10	6	3		4
11 am		4	5	23	4	2	7
12 pm	1	9	1	12	2	2	9
1 pm	1	4	4	5		2	13
2 pm	2	4	3	2		10	11
3 pm	1	1	4	2	2	4	11
4 pm	2	3	5	1	3	4	4
5 pm	1	1	4	1	2	5	3
6 pm	2	1	4		2	3	3
7 pm		5	1			3	6
8 pm		1	1			1	1
9 pm			1				2
10 pm	1	1					
11 pm					1		
Prorated Daily Helio Activity	2	3	3	3	2	3	3
Total Daily Aircraft Takeoffs	30	50	50	77	25	47	87
Prorated Total Helio Activity	19						
Total Fixed-Wing Activity	347						
Total Aircraft Takeoffs	366						

Source: DVRPC

Weekly Activity Report
 MQS Chester County
 Airport
 MQS Summer I 2016

For: 14 July 2016 - 20 July 2016

Day->	Thurs 14-Jul	Fri 15-Jul	Sat 16-Jul	Sun 17-Jul	Mon 18-Jul	Tues 19-Jul	Wed 20-Jul
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am		1					1
7 am	2	3			3	4	1
8 am	4	3	2	6	7		5
9 am	9	7	13	8	8	3	8
10 am	5	5	6	11	6	6	12
11 am	6	4	6	17	6	6	5
12 pm	7	5	12	12	3	4	16
1 pm	6	6	2	19	3	9	2
2 pm	3	1	5	16	1	1	12
3 pm	6	11		12	1	3	11
4 pm	1	3	2	3	1	1	3
5 pm	6	4		2		2	2
6 pm	4	1		5		3	4
7 pm	2	2		11		1	7
8 pm	1	3	1	5	1	3	6
9 pm						1	3
10 pm						2	
11 pm							
Prorated Daily Helio Activity	3	3	2	3	3	2	3
Total Daily Aircraft Takeoffs	65	62	51	130	43	51	101
Prorated Total Helio Activity	19						
Total Fixed-Wing Activity	484						
Total Aircraft Takeoffs	503						

Source: DVRPC

Weekly Activity Report
 MQS Chester County
 Airport
 MQS Summer II 2016

For 09 August 2016 - 15 August 2016

Day->	Fri 9-Sep	Sat 10-Sep	Sun 11-Sep	Mon 12-Sep	Tues 13-Sep	Wed 14-Sep	Thurs 15-Sep
12 am			1				
1 am							
2 am	1				1		
3 am							
4 am							
5 am							
6 am	1	1					
7 am		1			2	1	
8 am	1	1	2		5	1	1
9 am	7	5	4	2	2	8	3
10 am	5	1	3	11	2	6	11
11 am	1	2	5	7	2	8	12
12 pm	3	7	3	2	1	10	2
1 pm	14	6	2	4	6	8	7
2 pm	3	5	5	4	1	12	7
3 pm	4	4	5	5	2	10	7
4 pm	6	7	2	3	2	7	9
5 pm	4	8	3	7	3	1	14
6 pm	1	3		9	6	2	13
7 pm		1	3	4	2		2
8 pm	5				2	1	2
9 pm	1				2		1
10 pm	1	1		2		1	
11 pm							
Prorated Daily Helio Activity	3	3	2	3	2	3	3
Total Daily Aircraft Takeoffs	61	56	40	63	43	79	94
Prorated Total Helio Activity	19						
Total Fixed-Wing Activity	417						
Total Aircraft Takeoffs	436						

Source: DVRPC

Weekly Activity Report
 MQS Chester County
 Airport
 MQS Fall I 2016

For: 21 October 2016 - 27 October 2016

Day->	Fri 21-Oct	Sat 22-Oct	Sun 23-Oct	Mon 24-Oct	Tues 25-Oct	Wed 26-Oct	Thurs 27-Oct
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am					2		
7 am	2		1	1		2	2
8 am	3		3	3	1	3	1
9 am	5		2	1	4	2	1
10 am	4		3	10	4	2	2
11 am	3		2	2	1	14	8
12 pm	7		1	4	3	7	7
1 pm	3	1	1	1	2	5	5
2 pm	4	1	3	1	4	13	5
3 pm	3	1	4	3	3	6	3
4 pm	2		4	2	4	4	3
5 pm	1		2	2	4	6	1
6 pm	2		1	2	5	1	3
7 pm	1		2	3	1		2
8 pm		1	3	1	2	2	
9 pm	2		1		1		1
10 pm			1	2	1		
11 pm				1		1	
Prorated Daily Helio Activity	3	2	2	3	3	3	3
Total Daily Aircraft Takeoffs	45	6	36	42	45	71	47
Prorated Total Helio Activity	19						
Total Fixed-Wing Activity	273						
Total Aircraft Takeoffs	292						

Source: DVRPC

Weekly Activity Report
 MQS Chester County
 Airport
 MQS Fall II 2016

For: 08 December 2016 - 14 December 2016

Day->	Thurs 8-Dec	Fri 9-Dec	Sat 10-Dec	Sun 11-Dec	Mon 12-Dec	Tues 13-Dec	Wed 14-Dec
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							1
7 am							
8 am	1	2			1	2	1
9 am	2	3		4	2		1
10 am	5		15	2		1	2
11 am	13	5	13	2	1	2	3
12 pm	6	2	17	5	3	2	7
1 pm	4	1	9	5	1	2	2
2 pm	2	2	9	3	1	13	7
3 pm		1	8	6	1	7	5
4 pm		3	6	10	1	6	5
5 pm	4	7	3	1	1	8	2
6 pm	1	1		1		5	3
7 pm		3		2	1	2	1
8 pm		1	1			2	1
9 pm				3	1		
10 pm	3						
11 pm						1	
Prorated Daily Helio Activity	3	2	3	3	2	3	3
Total Daily Aircraft Takeoffs	44	33	84	47	16	56	44
Prorated Total Helio Activity	19						
Total Fixed-Wing Activity	305						
Total Aircraft Takeoffs	324						

Source: DVRPC

Penncast Airport (CKZ)

Bucks County

Perkasie, PA 18944

Runway Orientation: 08/26

Runway Length: 4,215 ft.

Table 6: Penncast Airport (CKZ) Based Aircraft

Based Aircraft Fleet Mix	
Single-Engine	48
Multi-Engine	2
Jet	2
Helicopter	0
Glider	0
Total	52

Source: AirNav.com

Penncast Airport is a privately owned, public use airport located one mile north of Perkasie, in Bucks County. There are 52 fixed-wing based aircraft.

Figure 6: Pennridge Airport (CKZ) Aerial Photo



DVRPC Aircraft Counting Program

Airport: Pennridge Airport (CKZ)

County: Bucks

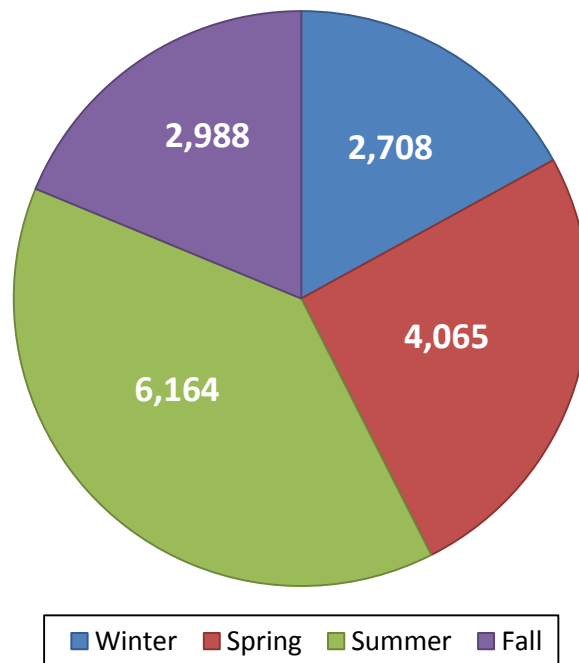
Table 7: Pennridge Airport (CKZ) Annual Summary

Season	Year	Average Daily Operations	Total Operations	Percentage of Annual Operations
Winter	2016	30.43	2,708	17%
Spring	2016	43.71	4,065	26%
Summer	2016	65.57	6,164	39%
Fall	2016	33.57	2,988	19%
Annual Operations:	2016		15,925	

Margin of Error: 16 at 95 percent confidence

Source: DVRPC

Figure 7: Pennridge Airport (CKZ) Seasonal Summary



Source: DVRPC

Weekly Activity Report
 CKZ Pennridge Airport
 CKZ Winter I 2016

For: 02 February 2016 - 08 February 2016

Day->	Tues 2-Feb	Wed 3-Feb	Thurs 4-Feb	Fri 5-Feb	Sat 6-Feb	Sun 7-Feb	Mon 8-Feb
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							3
6 am							
7 am	3	1	1		3	1	
8 am	1		1			1	
9 am	1				4	1	1
10 am	3		4		2	1	1
11 am	2		1	3	4	6	3
12 pm	1		4	1	2	4	1
1 pm	2		1		3	2	2
2 pm	2		1	2	1	2	1
3 pm	1		3		3	5	4
4 pm	1		3	1	1	8	3
5 pm	1				1	2	1
6 pm						1	1
7 pm							
8 pm							
9 pm							
10 pm							
11 pm							
Prorated Daily Helio Activity	0	0	0	0	0	0	0
Total Daily Aircraft Takeoffs	18	1	19	7	24	34	21
Prorated Total Helio Activity	0						
Total Fixed-Wing Activity	124						
Total Aircraft Takeoffs	124						

Source: DVRPC

Weekly Activity Report
 CKZ Pennridge Airport
 CKZ Winter II 2016

For: 03 March 2016 - 09 March 2016

Day->	Thurs 3-Mar	Fri 4-Mar	Sat 5-Mar	Sun 6-Mar	Mon 7-Mar	Tues 8-Mar	Wed 9-Mar
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am	1		3				1
8 am	3		2	1	1	2	4
9 am	1	1	5	4		1	2
10 am	3		1			2	2
11 am			3	1	1	2	2
12 pm	4		1			3	1
1 pm	2		1		2	1	
2 pm			1	1		1	
3 pm			2	1		1	1
4 pm	2	1		3		3	1
5 pm				1		1	1
6 pm	1			1		1	1
7 pm							
8 pm							
9 pm							
10 pm							
11 pm							
Prorated Daily Helio Activity	0	0	0	0	0	0	0
Total Daily Aircraft Takeoffs	17	2	19	13	4	18	16
Prorated Total Helio Activity	0						
Total Fixed-Wing Activity	89						
Total Aircraft Takeoffs	89						

Source: DVRPC

Weekly Activity Report
 CKZ Pennridge Airport
 CKZ Spring I 2016

For: 12 May 2016 - 18 May 2016

Day->	Thurs 12-May	Fri 13-May	Sat 14-May	Sun 15-May	Mon 16-May	Tues 17-May	Wed 18-May
12 am						1	
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am							2
8 am	3		2				
9 am	6		3	1		2	
10 am	4		1	5			1
11 am	2			1	1		1
12 pm	6		1			3	3
1 pm	6			1		1	6
2 pm	7		1				6
3 pm	3						2
4 pm	4						5
5 pm	5						2
6 pm	2				1		
7 pm	1				1		1
8 pm							
9 pm							
10 pm							1
11 pm							
Prorated Daily Helio Activity	0	0	0	0	0	0	0
Total Daily Aircraft Takeoffs	49	0	8	8	3	7	30
Prorated Total Helio Activity	0						
Total Fixed-Wing Activity	105						
Total Aircraft Takeoffs	105						

Source: DVRPC

Weekly Activity Report
 CKZ Pennridge Airport
 CKZ Spring II 2016

For: 09 June 2016 - 15 June 2016

Day->	Thurs 9-Jun	Fri 10-Jun	Sat 11-Jun	Sun 12-Jun	Mon 13-Jun	Tues 14-Jun	Wed 15-Jun
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							1
7 am	2			2	1	2	1
8 am	5		9			3	1
9 am	2	1	5	1		3	3
10 am	2		4	1		2	2
11 am	4	1	8			10	7
12 pm			7		1	6	5
1 pm		2	2			7	3
2 pm					1	8	4
3 pm	5	1		1		4	2
4 pm		1			1	3	5
5 pm	1	2		1	2	4	6
6 pm	1	1		1	1	8	8
7 pm					3	2	3
8 pm	2						
9 pm		2					
10 pm		1					
11 pm							
Prorated Daily Helio Activity	0	0	0	0	0	0	0
Total Daily Aircraft Takeoffs	24	12	35	7	10	62	51
Prorated Total Helio Activity	0						
Total Fixed-Wing Activity	201						
Total Aircraft Takeoffs	201						

Source: DVRPC

Weekly Activity Report
 CKZ Pennridge Airport
 CKZ Summer I 2016

For: 11 August 2016 - 17 August 2016

Day->	Thurs 11-Aug	Fri 12-Aug	Sat 13-Aug	Sun 14-Aug	Mon 15-Aug	Tues 16-Aug	Wed 17-Aug
12 am							
1 am							
2 am							
3 am							
4 am							
5 am					1		
6 am					1		
7 am		2					1
8 am	1		2	1	5	4	4
9 am	3	3	6	6	2	2	1
10 am	7	1	3	3	3	2	2
11 am	3	6	4	4	5	2	3
12 pm		1	6	3	3	4	2
1 pm		9	5	5	2		5
2 pm	1	8	1	4	4	3	3
3 pm	3	1	3	11	1	5	3
4 pm	2	2	4	4	2		2
5 pm		1	2	5	1		
6 pm				1	1	1	1
7 pm		3	1		4		1
8 pm		3	1	1	4		
9 pm			1				
10 pm							
11 pm							
Prorated Daily Helio Activity	0	0	0	0	0	0	0
Total Daily Aircraft Takeoffs	20	40	39	48	39	23	28
Prorated Total Helio Activity	0						
Total Fixed-Wing Activity	237						
Total Aircraft Takeoffs	237						

Source: DVRPC

Weekly Activity Report
 CKZ Pennridge Airport
 CKZ Summer II 2016

For: 07 September 2016 - 13 September 2016

Day->	Wed 7-Sep	Thurs 8-Sep	Fri 9-Sep	Sat 10-Sep	Sun 11-Sep	Mon 12-Sep	Tues 13-Sep
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am	1		1				2
8 am	3	1	5	1		1	2
9 am	1	1	1	7		3	1
10 am	5	6	7	7	2	3	1
11 am	6	3	9	3	2	4	4
12 pm	2	4	1	4		6	
1 pm	7	5	2	4		6	1
2 pm	3	5	8			5	1
3 pm	6	2	1	2		8	1
4 pm	3	2		6	2	2	
5 pm	2		1	2	1	2	1
6 pm	4	1	2	1		2	2
7 pm		3			1		
8 pm		1				4	
9 pm							
10 pm							
11 pm							
Prorated Daily Helio Activity	0	0	0	0	0	0	0
Total Daily Aircraft Takeoffs	43	34	38	37	8	46	16
Prorated Total Helio Activity	0						
Total Fixed-Wing Activity	222						
Total Aircraft Takeoffs	222						

Source: DVRPC

Weekly Activity Report
 CKZ Pennridge Airport
 CKZ Fall I 2016

For: 21 October 2016 - 27 October 2016

Day->	Fri 21-Oct	Sat 22-Oct	Sun 23-Oct	Mon 24-Oct	Tues 25-Oct	Wed 26-Oct	Thurs 27-Oct
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am	1						1
8 am	2			4		1	
9 am	3			1		2	2
10 am	3				1	2	2
11 am	2		3				1
12 pm	1			1	1	3	
1 pm	3					3	1
2 pm	4				1		3
3 pm	2					2	3
4 pm	1					3	2
5 pm	1		1			11	1
6 pm	1				3	2	1
7 pm						1	2
8 pm						1	2
9 pm				1			
10 pm							
11 pm							
Prorated Daily Helio Activity	0	0	0	0	0	0	0
Total Daily Aircraft Takeoffs	24	0	4	7	6	31	21
Prorated Total Helio Activity	0						
Total Fixed-Wing Activity	93						
Total Aircraft Takeoffs	93						

Source: DVRPC

Weekly Activity Report
 CKZ Pennridge Airport
 CKZ Fall II 2016

For: 08 December 2016 - 14 December 2016

Day->	Thurs 8-Dec	Fri 9-Dec	Sat 10-Dec	Sun 11-Dec	Mon 12-Dec	Tues 13-Dec	Wed 14-Dec
12 am	1						
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am							
8 am	1		4	1		2	1
9 am	1	2	2	3		1	1
10 am	2	1	4	3		4	4
11 am		2	2	6		1	4
12 pm		3	3	3		1	2
1 pm	1	2		4		2	1
2 pm	2	1	2	2		3	3
3 pm	2	3	1	5		1	3
4 pm			1	5	1	3	1
5 pm				1	2		1
6 pm	1	2		2	4		
7 pm		1	2				
8 pm			7				
9 pm	3		2				
10 pm							
11 pm							
Prorated Daily Helio Activity	0	0	0	0	0	0	0
Total Daily Aircraft Takeoffs	14	17	30	35	7	18	21
Prorated Total Helio Activity	0						
Total Fixed-Wing Activity	142						
Total Aircraft Takeoffs	142						

Source: DVRPC

Quakertown Airport (UKT)

Bucks County

Quakertown, PA 18951

Runway Orientation: 11/29

Runway Length: 3,210 ft.

Table 8: Quakertown Airport (UKT) Based Aircraft

Based Aircraft Fleet Mix	
Single-Engine	79
Multi-Engine	7
Jet	1
Helicopter	0
Glider	0
Total	87

Source: AirNav.com

Quakertown Airport, two miles west of Quakertown, is a public use airport owned by the Bucks County Airport Authority. There are 87 fixed-wing based aircraft.

Figure 8: Quakertown Airport (UKT) Aerial Photo



DVRPC Aircraft Counting Program

Airport: Quakertown Airport (UKT)

County: Bucks

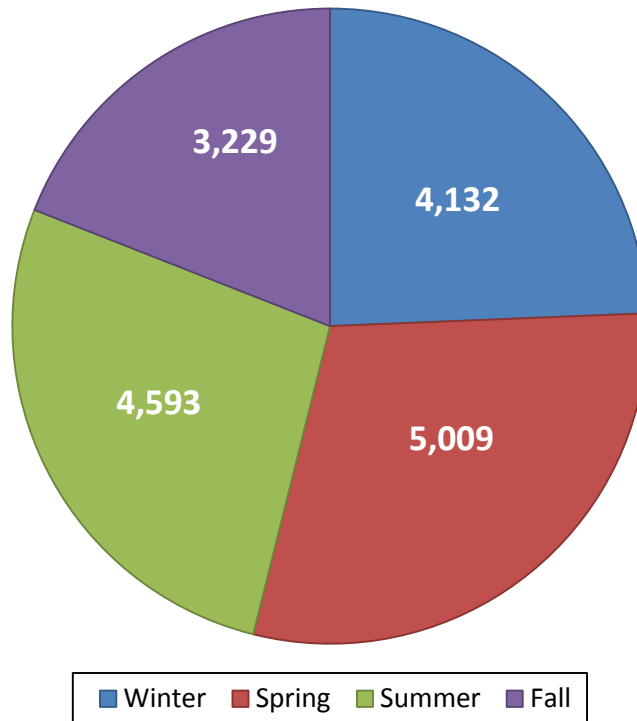
Table 9: Quakertown Airport (UKT) Annual Summary

Season	Year	Average Daily Operations	Total Operations	Percentage of Annual Operations
Winter	2016	46.43	4,132	24%
Spring	2016	53.86	5,009	30%
Summer	2016	48.86	4,593	27%
Fall	2016	36.29	3,229	19%
Annual Operations:	2016		16,963	

Margin of Error: 14 at 95 percent confidence

Source: DVRPC

Figure 9: Quakertown Airport (UKT) Seasonal Summary



Source: DVRPC

Weekly Activity Report
 UKT Quakertown Airport
 UKT Winter I 2016

For: 02 February 2016 - 08 February 2016

Day->	Tues 2-Feb	Wed 3-Feb	Thurs 4-Feb	Fri 5-Feb	Sat 6-Feb	Sun 7-Feb	Mon 8-Feb
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am	3					1	
8 am	5		5		2	7	1
9 am	2		3		5	3	3
10 am			3	1	4	5	1
11 am	3		1		4	10	3
12 pm			2		2	9	2
1 pm	4		1		10	8	3
2 pm	2				1	6	1
3 pm	2		1		3	1	1
4 pm						3	2
5 pm					3	1	1
6 pm							
7 pm							
8 pm							
9 pm							
10 pm							
11 pm							
Prorated Daily Helio Activity	3	0	3	3	4	4	3
Total Daily Aircraft Takeoffs	24	0	19	4	38	58	21
Prorated Total Helio Activity	20						
Total Fixed-Wing Activity	144						
Total Aircraft Takeoffs	164						

Source: DVRPC

Weekly Activity Report
 UKT Quakertown Airport
 UKT Winter II 2016

For: 04 March 2016 - 10 March 2016

Day->	Fri 4-Mar	Sat 5-Mar	Sun 6-Mar	Mon 7-Mar	Tues 8-Mar	Wed 9-Mar	Thurs 10-Mar
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am					1	1	
8 am		7	3		5	2	5
9 am		4		1	5	2	7
10 am		1	4		2	3	5
11 am	1	5	1				
12 pm	5		1		1	1	1
1 pm	3	4	2		5	1	1
2 pm	1	3	1	2			
3 pm		5		1	3		3
4 pm		5		1	10		
5 pm			2	7	3	1	2
6 pm							
7 pm							
8 pm						1	
9 pm							
10 pm							
11 pm							
Prorated Daily Helio Activity	2	3	3	3	3	3	3
Total Daily Aircraft Takeoffs	12	37	17	15	38	15	27
Prorated Total Helio Activity	20						
Total Fixed-Wing Activity	141						
Total Aircraft Takeoffs	161						

Source: DVRPC

Weekly Activity Report
 UKT Quakertown Airport
 UKT Spring I 2016

For: 11 May 2016 - 17 May 2016

Day->	Wed 11-May	Thurs 12-May	Fri 13-May	Sat 14-May	Sun 15-May	Mon 16-May	Tues 17-May
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am	1	1				1	7
8 am	3	4		3	4		4
9 am	3	7		9		1	2
10 am	7	3		8		1	5
11 am	2	2		9	2		
12 pm	3	3		9			1
1 pm	7						
2 pm	2	1		2			
3 pm	1	1					1
4 pm	2					6	1
5 pm	4	1				8	2
6 pm		2	1			6	3
7 pm	3		1				2
8 pm							1
9 pm	1						1
10 pm	2						
11 pm							
Prorated Daily Helio Activity	3	3	2	3	3	3	3
Total Daily Aircraft Takeoffs	44	28	4	43	9	26	33
Prorated Total Helio Activity	20						
Total Fixed-Wing Activity	167						
Total Aircraft Takeoffs	187						

Source: DVRPC

Weekly Activity Report
 UKT Quakertown Airport
 UKT Spring II 2016

For: 09 June 2016 - 15 June 2016

Day->	Thurs 9-Jun	Fri 10-Jun	Sat 11-Jun	Sun 12-Jun	Mon 13-Jun	Tues 14-Jun	Wed 15-Jun
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							1
6 am					1	1	
7 am	1	1	2			4	1
8 am	1	2	7	5	1	8	4
9 am	3	1	5			4	1
10 am	3	4	5	1	4	8	5
11 am	4	4	7			1	2
12 pm	1	1				2	3
1 pm	3	2			2	3	1
2 pm					2	1	2
3 pm		1	2		3		3
4 pm	1	1			1		2
5 pm		4				1	2
6 pm	1	7	1				
7 pm		1		1	1	3	1
8 pm							2
9 pm			1			1	
10 pm		3	1				
11 pm							
Prorated Daily Helio Activity	3	3	3	2	3	3	3
Total Daily Aircraft Takeoffs	21	35	34	9	18	40	33
Prorated Total Helio Activity	20						
Total Fixed-Wing Activity	170						
Total Aircraft Takeoffs	190						

Source: DVRPC

Weekly Activity Report
 UKT Quakertown Airport
 UKT Summer I 2016

For: 14 July 2016 - 20 July 2016

Day->	Thurs 14-Jul	Fri 15-Jul	Sat 16-Jul	Sun 17-Jul	Mon 18-Jul	Tues 19-Jul	Wed 20-Jul
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							1
6 am	1			5	1	1	
7 am	2	1	3			2	1
8 am	2	1	8	3	1		2
9 am	3	3	7	4	1		1
10 am	3	1	3	6			2
11 am	3	1	3	1		2	1
12 pm	4	3	6	1	3		1
1 pm	2	10	9	1	3		
2 pm		1	2	1	1	1	4
3 pm		1		2		1	1
4 pm			1	1		6	4
5 pm	1					1	3
6 pm	1	1				2	1
7 pm			2	1	1		2
8 pm				4			1
9 pm							2
10 pm							
11 pm							
Prorated Daily Helio Activity	3	3	3	3	2	3	3
Total Daily Aircraft Takeoffs	25	26	47	33	13	19	30
Prorated Total Helio Activity	20						
Total Fixed-Wing Activity	173						
Total Aircraft Takeoffs	193						

Source: DVRPC

Weekly Activity Report
 UKT Quakertown Airport
 UKT Summer II 2016

For: 07 September 2016 - 13 September 2016

Day->	Wed 7-Sep	Thurs 8-Sep	Fri 9-Sep	Sat 10-Sep	Sun 11-Sep	Mon 12-Sep	Tues 13-Sep
12 am			1				
1 am							
2 am							
3 am							
4 am							
5 am				1			
6 am	1	1				1	
7 am							
8 am	3		1	8	2		1
9 am	1	3	1	10			1
10 am	5	3	1	6		1	1
11 am	2	3	4	3	1		
12 pm		2				1	1
1 pm	1	1		1		1	1
2 pm		1		2			
3 pm	2	1	2				
4 pm	1	3		2		2	
5 pm	2	2	1	1		2	1
6 pm	5	2	2	1		1	5
7 pm	2	3				4	4
8 pm							
9 pm							
10 pm							
11 pm							
Prorated Daily Helio Activity	3	3	3	3	2	3	3
Total Daily Aircraft Takeoffs	28	28	16	38	5	16	18
Prorated Total Helio Activity	20						
Total Fixed-Wing Activity	129						
Total Aircraft Takeoffs	149						

Source: DVRPC

Weekly Activity Report
 UKT Quakertown Airport
 UKT Fall I 2016

For: 21 October 2016 - 27 October 2016

Day->	Fri 21-Oct	Sat 22-Oct	Sun 23-Oct	Mon 24-Oct	Tues 25-Oct	Wed 26-Oct	Thurs 27-Oct
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am							
8 am	1		2	1			1
9 am	3			1	6	7	
10 am	1			1	1	8	3
11 am			1			5	2
12 pm	2			1	1	3	2
1 pm	1					1	
2 pm	3		3		2		3
3 pm	3					5	1
4 pm			2	1	2	1	5
5 pm	1		1	1		1	3
6 pm	2		1	2		4	1
7 pm	1			2			
8 pm			1				
9 pm							
10 pm							
11 pm							
Prorated Daily Helio Activity	3		3	3	3	4	4
Total Daily Aircraft Takeoffs	21	0	14	13	15	39	25
Prorated Total Helio Activity	20						
Total Fixed-Wing Activity	107						
Total Aircraft Takeoffs	127						

Source: DVRPC

Weekly Activity Report
 UKT Quakertown Airport
 UKT Fall II 2016

For: 06 December 2016 - 12 December 2016

Day->	Tues 6-Dec	Wed 7-Dec	Thurs 8-Dec	Fri 9-Dec	Sat 10-Dec	Sun 11-Dec	Mon 12-Dec
12 am							
1 am							
2 am							
3 am							
4 am							
5 am							
6 am							
7 am			1		1		
8 am	1					1	
9 am	3					5	
10 am	1				7	1	
11 am	5		1	1	8	2	
12 pm	6				4	7	
1 pm	2				2	2	
2 pm	10		1		2	1	
3 pm	1	2		2	2	4	
4 pm		8	2		2		1
5 pm		3					
6 pm				2			
7 pm				1			
8 pm				1			
9 pm		1					
10 pm							
11 pm							
Prorated Daily Helio Activity	3	3	3	3	3	3	2
Total Daily Aircraft Takeoffs	32	17	8	10	31	26	3
Prorated Total Helio Activity	20						
Total Fixed-Wing Activity	107						
Total Aircraft Takeoffs	127						

Source: DVRPC

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Geographic Area Covered: Bucks County, Chester County in Pennsylvania.

Key Words: Aircraft Operations, Helicopter Operations, Airports, Fixed-Wing Airplane, Rotorcraft, Takeoffs, Landings, Count, Activity, Estimate, Seasonal, Annual, Acoustic Counter, Based Aircraft, Runway Length

Abstract: This technical report presents aircraft operations estimates for three non-towered airports in the Delaware Valley aviation planning area. Eight acoustic counts were taken at each airport, starting in January 2016 and ending in December 2016; each sample covered seven continuous days. The samples were extrapolated over the entire year, and the results are presented in this report. Results are used by multiple sources to monitor aircraft activity levels in the Delaware Valley and as a base for planning and forecasting documents.

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