FAA Wildlife Strikes, 2000 - 2015

FAA Wildlife Strikes, 2000 - 2015: Strikes Overview

Animal Category

Animal Category	
Bats	332
Birds	27,089
Reptiles	33
Terrestrial Mammals	844

Phase of Flight

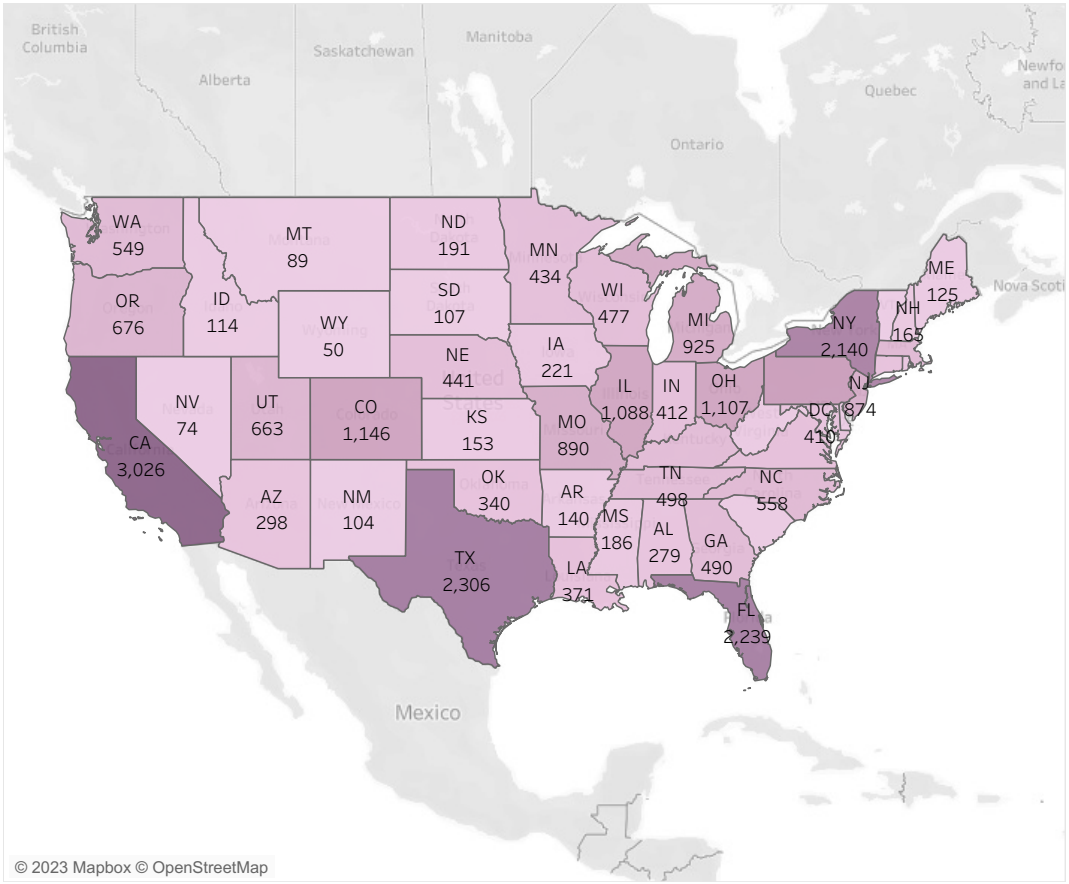
Phase of flight	
Approach	9,625
Arrival	23
Climb	3,402
Departure	57
Descent	250
Landing	239
Landing Roll	7,527
Local	45
Parked	22
Take-off run	6,579
Taxi	123

Severity of Damage

Severity of ..	
Destroyed	33
Medium	609
Minor	1,514
None	25,187
Substantial	955

Examine the effects of Wildlife Strikes from 2000 to 2025.

United States



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Which wildlife attributes to the largest number of strikes?

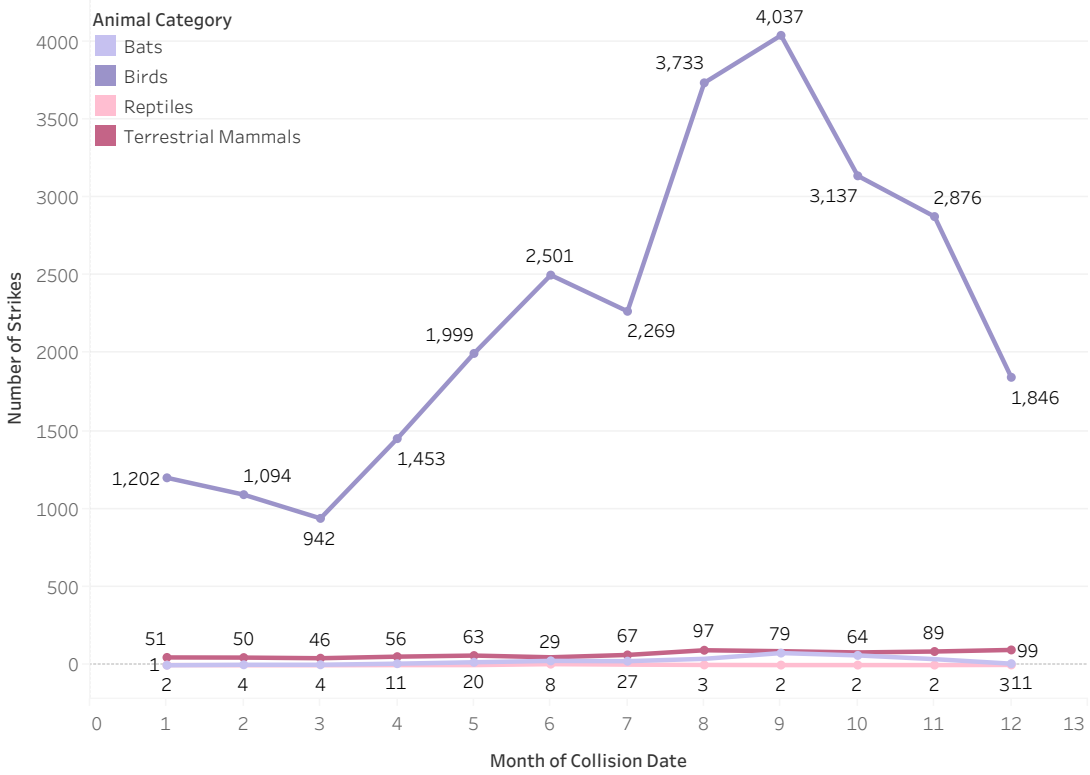
Animal Category

Animal Category	
Bats	332
Birds	27,089
Reptiles	33
Terrestrial Mammals	844

Top 10 Species

Species	
American kestrel	1,079
Barn swallow	1,629
European starling	1,462
Gulls	1,792
Horned lark	1,223
Killdeer	1,052
Mourning dove	2,002
Red-tailed hawk	899
Rock pigeon	995
Sparrows	1,091

Strikes by Month



Response: Birds are the largest animal category group that contributes to strikes on airplanes. When broken down further, 70% of the top species of birds are migratory.

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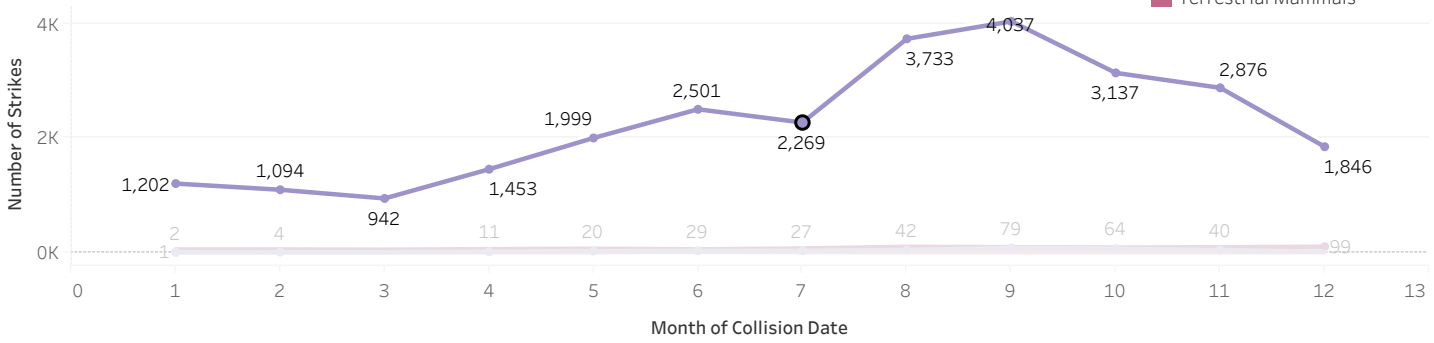
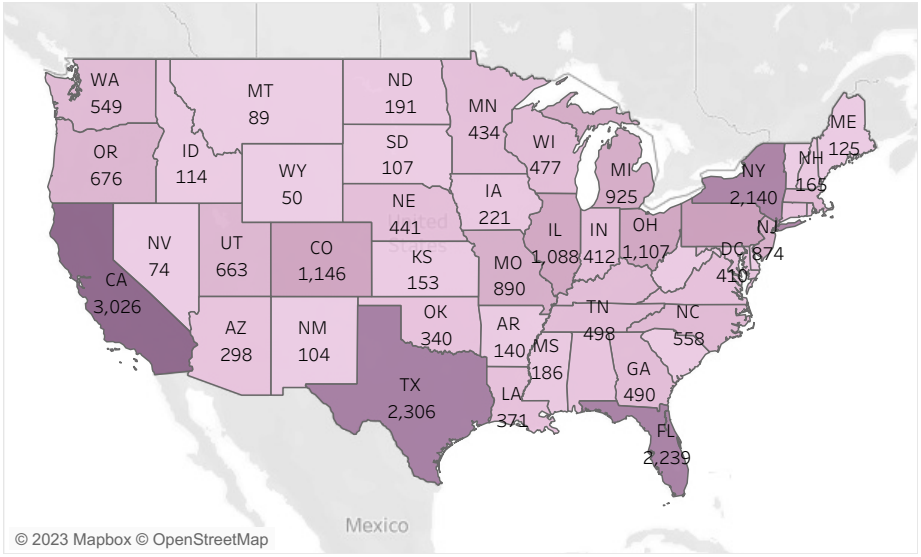
When and where are the most occurrences?

Animal Category
- Bats
- Birds
- Reptiles
- Terrestrial Mammals

Strikes by Month



United States



Response: In our line chart, we can see July, August, and September have the highest number of occurrences. Also, based on our map, California, Texas, Florida, and New York have the highest number of strikes, as well. Since we know 70% of the bird species are migratory, this would explain the increased number of strikes in those states, except New York.

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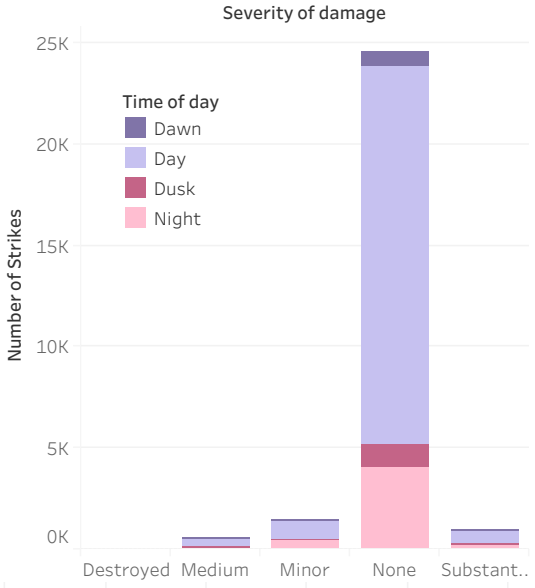
What time of day do strikes happen most often? What is the amount spent on damage and the severity of damage?

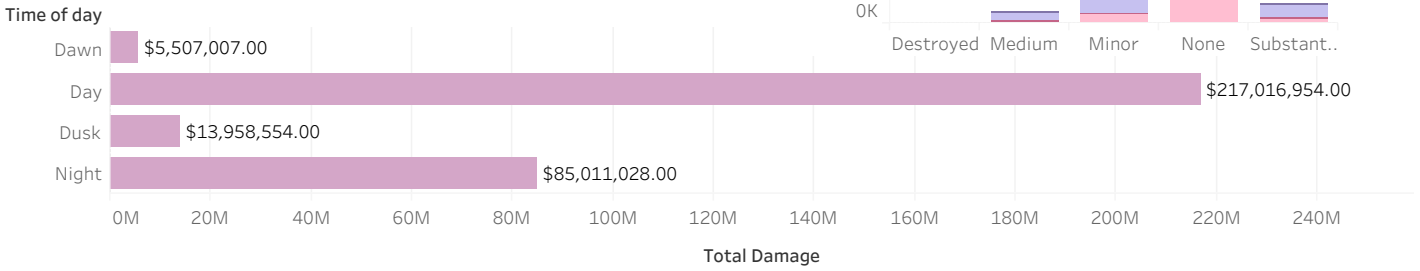
Response: We can see that most of the strikes happen during the day. The most damage, by dollar, occurred during the day, as well. However, despite the number of strikes, very few were severe damage occurrences.

Time of Day by Strike

Severity by Strike



Total Damage by Dollar



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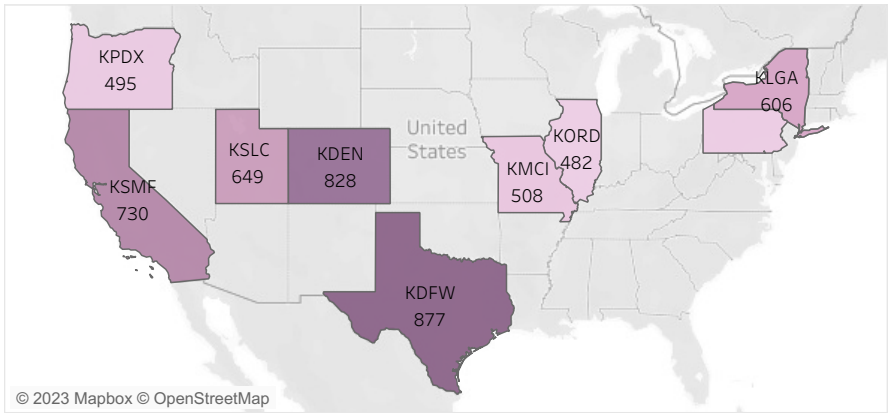
Does the number of strikes correlate with the cost of damage by the airport?

Response: We can see, there is a correlation between the number of strikes and total damage by dollars. The airports with the highest number of strikes are the same airports which has the highest number of spent on damages.

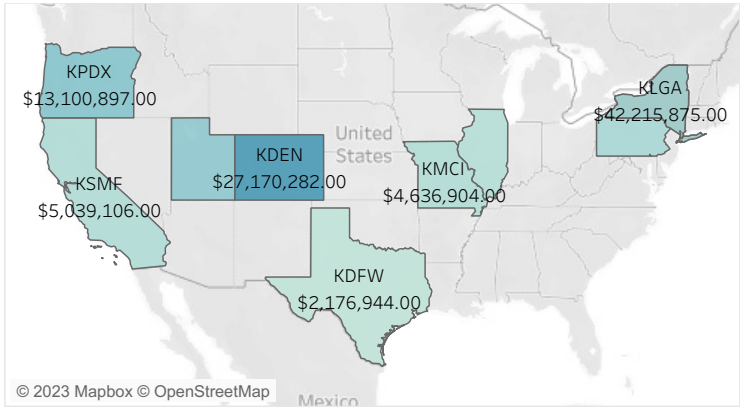
Strikes by Airport

Airport: ..	Airport: Name	Origin State	
KDFW	DALLAS/FORT WO..	Texas	877
KDEN	DENVER INTL AIRP..	Colorado	828
KSMF	SACRAMENTO INTL	California	730
KSLC	SALT LAKE CITY IN..	Utah	649
KLGA	LA GUARDIA ARPT	New York	606
KJFK	JOHN F KENNEDY I..	New York	575
KMCI	KANSAS CITY INTL	Missouri	508
KPDX	PORTLAND INTL (O..	Oregon	495
KPHL	PHILADELPHIA INTL	Pennsylvania	486
KORD	CHICAGO O'HARE I..	Illinois	482

Strikes by Airport



Total Damage ($) by Airport



Total Damage ($) by Airport

Airport..	Airport: Name	Origin State	
KLGA	LA GUARDIA ARPT	New York	$42,215,875.00
KDEN	DENVER INTL AIRPORT	Colorado	$27,170,282.00
KPDX	PORTLAND INTL (OR)	Oregon	$13,100,897.00
KSLC	SALT LAKE CITY INTL	Utah	$11,570,745.00
KPHL	PHILADELPHIA INTL	Pennsylvania	$6,401,259.00
KSMF	SACRAMENTO INTL	California	$5,039,106.00
KMCI	KANSAS CITY INTL	Missouri	$4,636,904.00
KORD	CHICAGO O'HARE INTL ..	Illinois	$4,139,231.00
KJFK	JOHN F KENNEDY INTL	New York	$3,074,535.00
KDFW	DALLAS/FORT WORTH I..	Texas	$2,176,944.00

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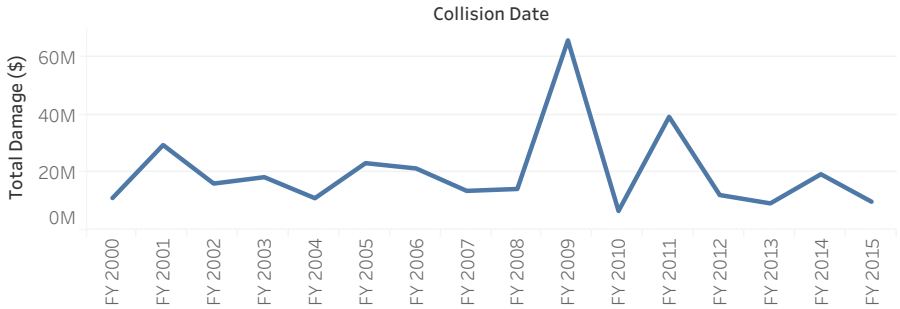
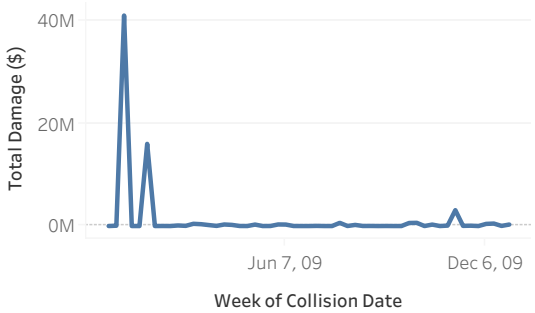
Outliers - Significant increase in damage costs on damages in 2009

Response: In 2009, significant damage costs were observed due to two airplanes being destroyed and significant damage to other planes. The larger vessel, with two engines, may have contributed to the increased costs.

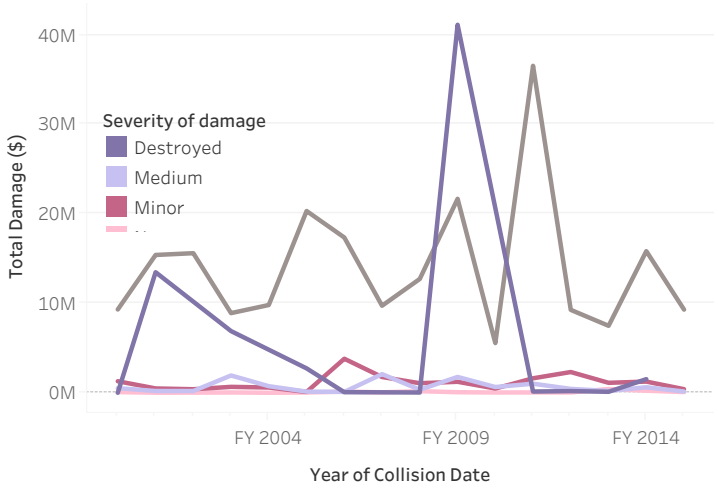
Cost of Damages



Cost of Damages - 2009



Cost of Damage by Severity



Number of Strikes and Engines - 2009

		Severity of damage	
	Month of Collis..	Destroyed	Substantial
Aircraft: Number of engines	January 2009	2.00	10.00
	February 2009		6.00
	March 2009		12.00
	April 2009		4.00
	May 2009		2.00
	June 2009		8.00
	July 2009		9.00
	August 2009		5.00
	September 2009		4.00
	October 2009		22.00
	November 2009		13.00
	December 2009		22.00
Number of Strikes	January 2009	1.00	4.00
	February 2009		3.00
	March 2009	1.00	6.00
	April 2009		2.00
	May 2009		1.00
	June 2009		3.00
	July 2009		5.00
	August 2009		2.00
	September 2009		2.00
	October 2009		11.00
	November 2009		7.00
	December 2009		11.00

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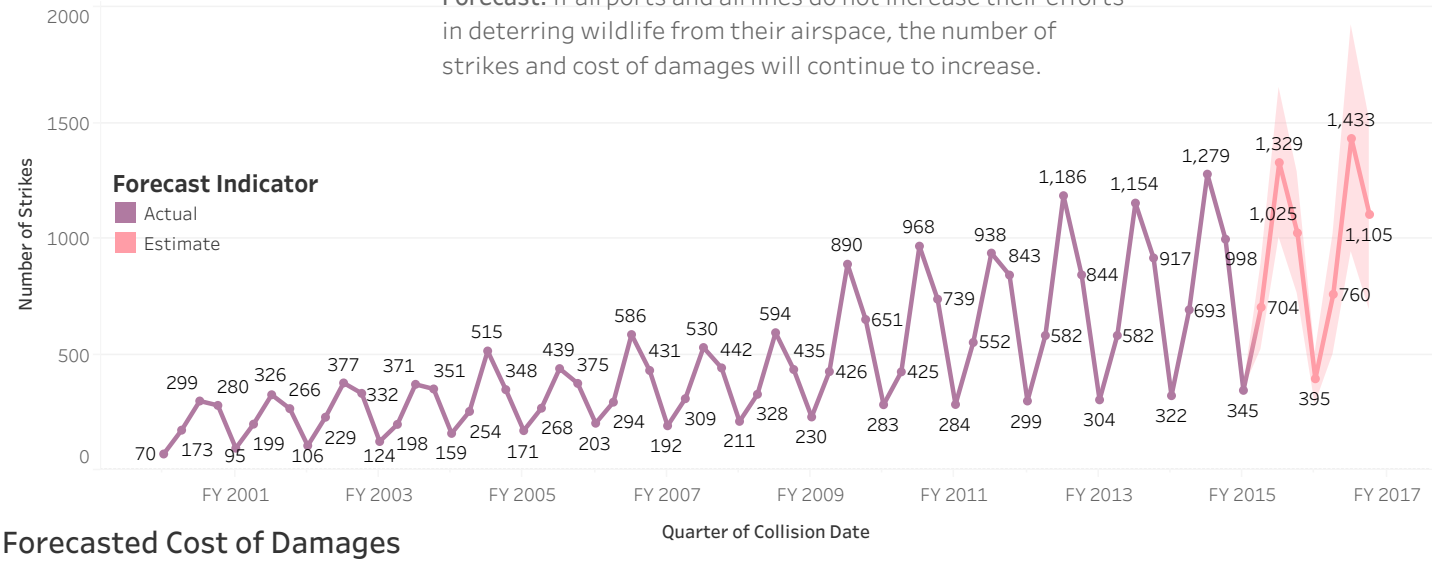
Cost of Damages and Number of Strikes - Forecast

Strikes by Quarter

Forecast: If airports and airlines do not increase their efforts in deterring wildlife from their airspace, the number of strikes and cost of damages will continue to increase.



Forecasted Cost of Damages