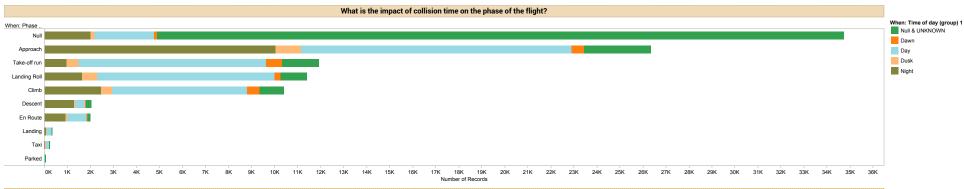


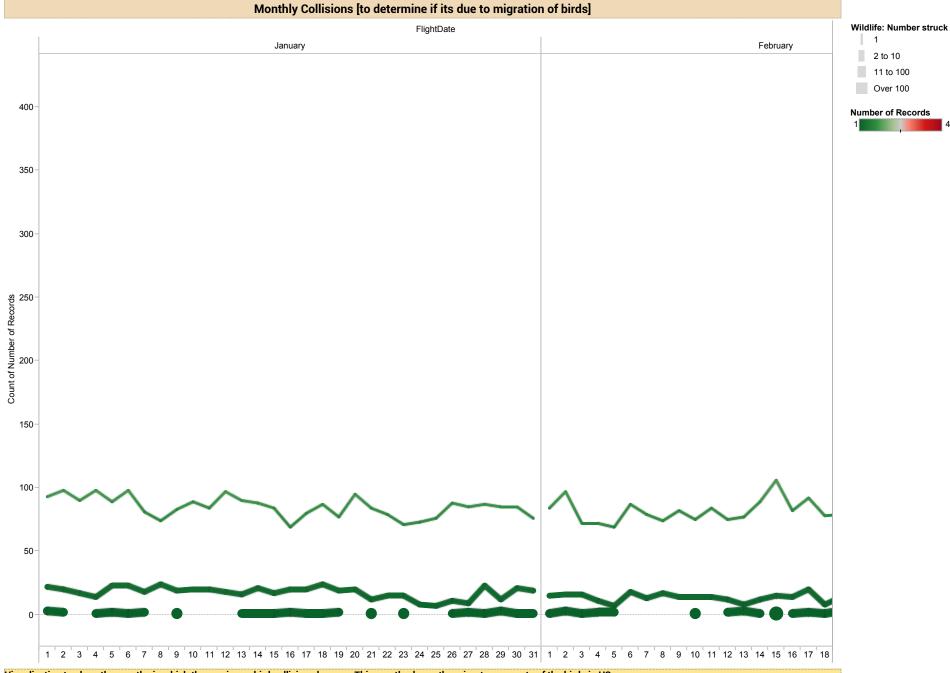
US Map view to showing the what time of the day have the states incurred the cost because of the collisions.

Map based on Longitude (generated) and Latitude (generated). Color shows details about When: Time of day. Size shows sum of Cost: Total \$. Details are shown for Origin State. The data is filtered on When: Time of day (group), which excludes Null & UNKNOWN.

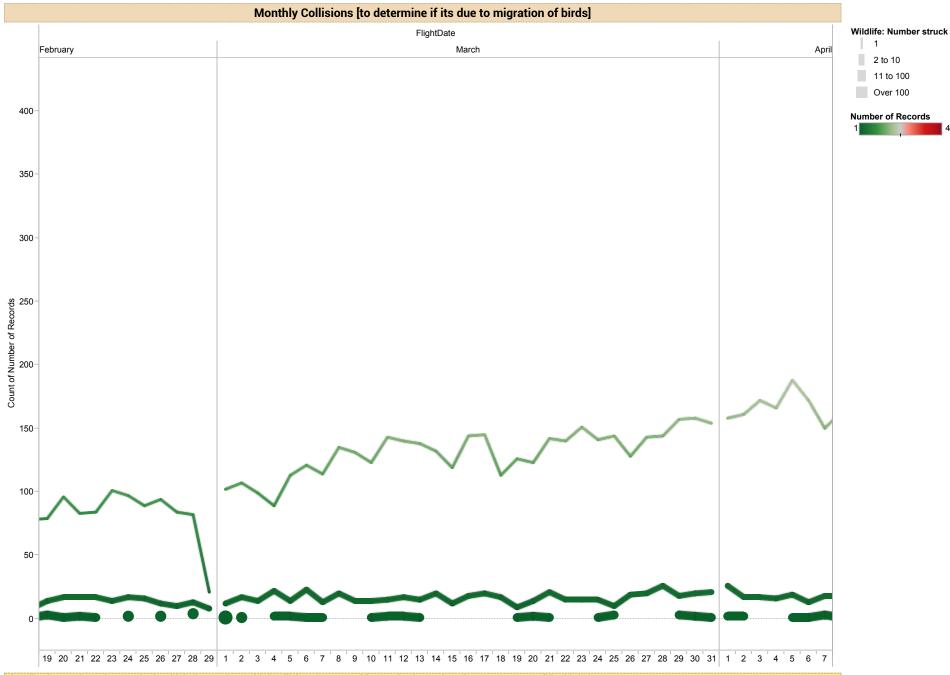


Visualization of the Phase of the flight at which the maximum collisions happen with a breakup of time of the day.

Sum of Number of Records for each When: Phase of flight. Color shows details about When: Time of day (group) 1. The data is filtered on Wildlife: Species, which keeps 609 of 609 members. The view is filtered on When: Phase of flight and When: Time of day (group) 1. The When: Phase of flight filter keeps 10 of 10 members. The When: Time of day (group) 1 filter excludes Null & UNKNOWN.

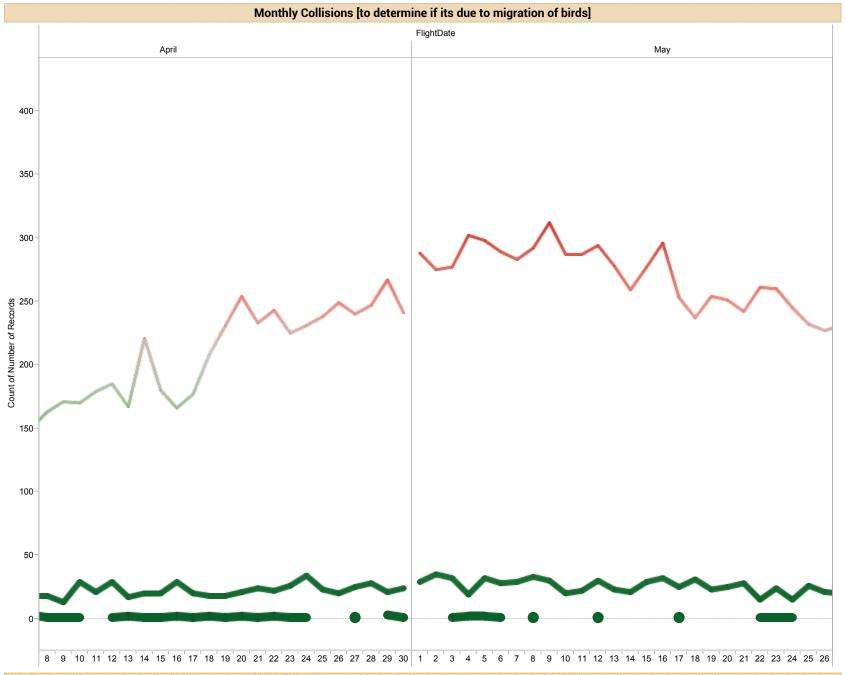


Visualization to show the months in which the maximum bird collisions happen. This mostly shows the migratory aspects of the birds in US.



2 to 10 11 to 100 Over 100

Visualization to show the months in which the maximum bird collisions happen. This mostly shows the migratory aspects of the birds in US.

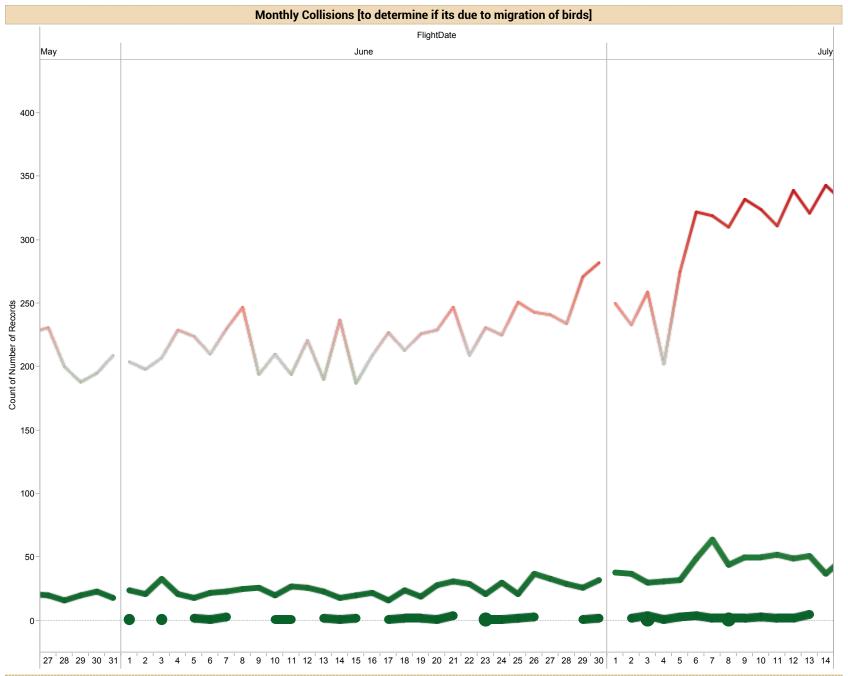


Wildlife: Number struck

2 to 10 11 to 100 Over 100

Number of Records

Visualization to show the months in which the maximum bird collisions happen. This mostly shows the migratory aspects of the birds in US.

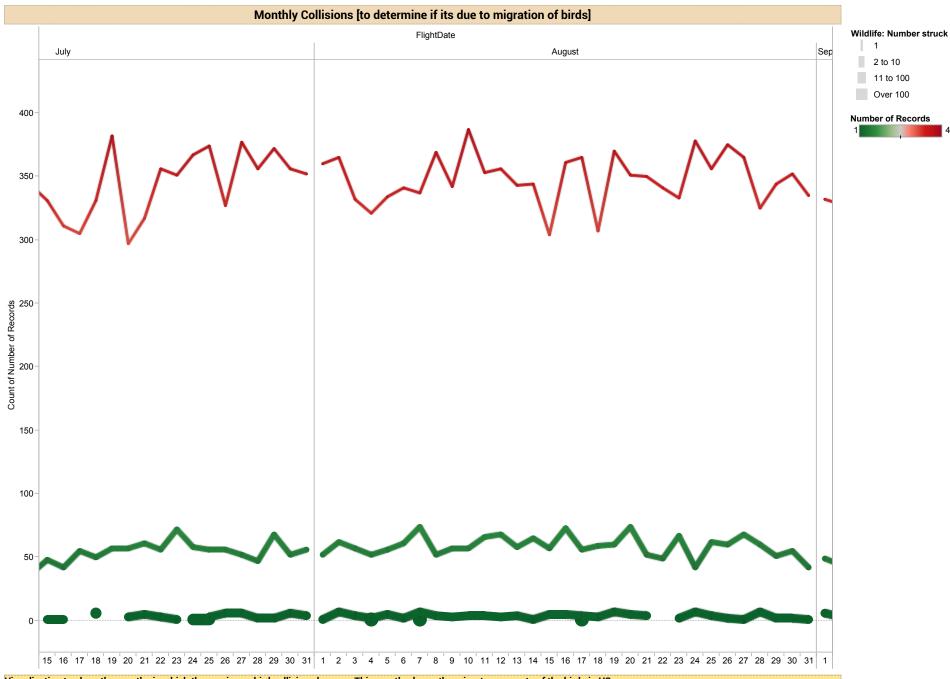


Wildlife: Number struck

2 to 10 11 to 100 Over 100

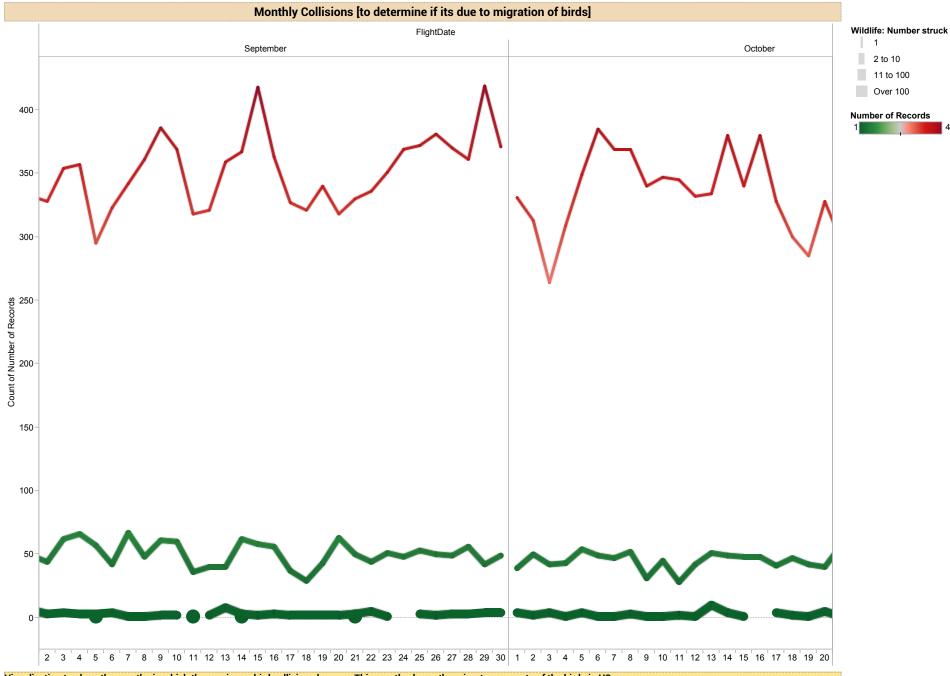
Number of Records

Visualization to show the months in which the maximum bird collisions happen. This mostly shows the migratory aspects of the birds in US.



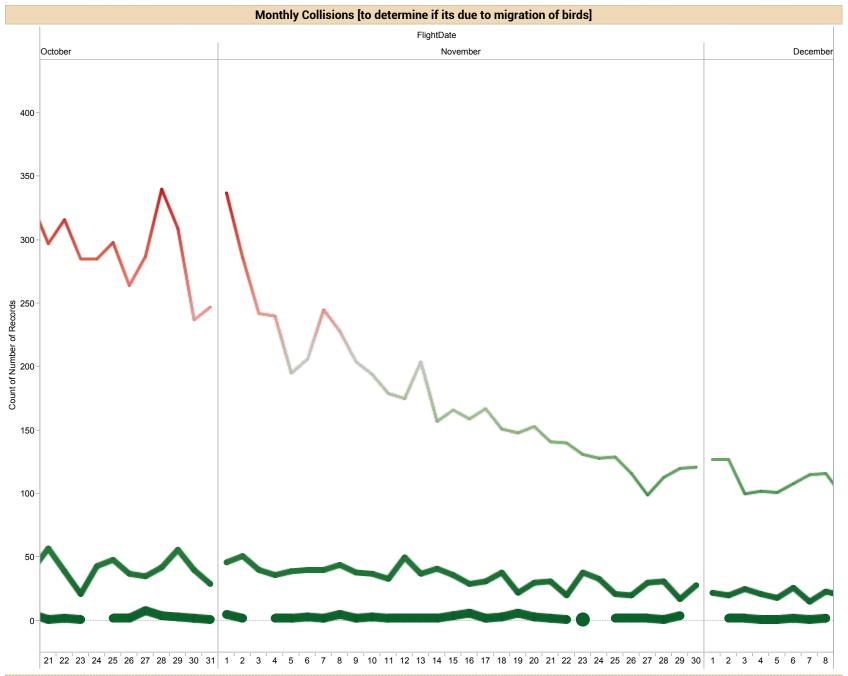
2 to 10 11 to 100 Over 100

Visualization to show the months in which the maximum bird collisions happen. This mostly shows the migratory aspects of the birds in US.



2 to 10 11 to 100 Over 100

Visualization to show the months in which the maximum bird collisions happen. This mostly shows the migratory aspects of the birds in US.



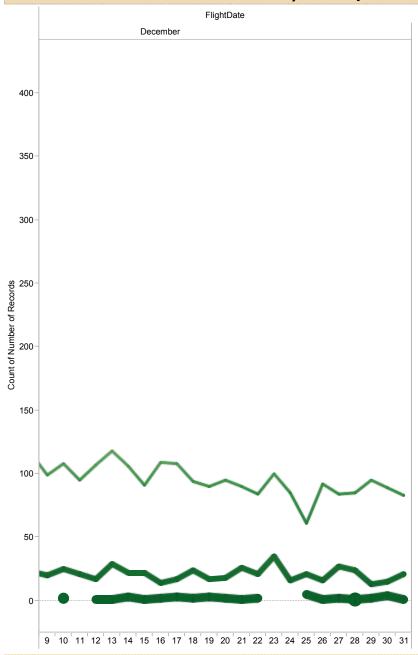
Wildlife: Number struck

2 to 10 11 to 100 Over 100

Number of Records

Visualization to show the months in which the maximum bird collisions happen. This mostly shows the migratory aspects of the birds in US.

Monthly Collisions [to determine if its due to migration of birds]



2 to 10
11 to 100
Over 100

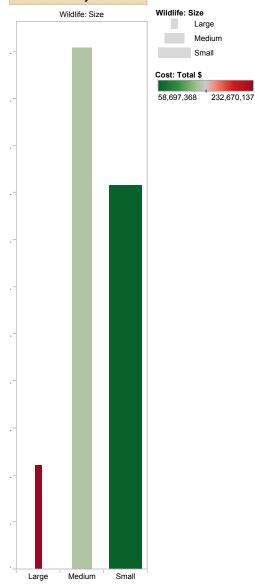
Number of Records
1 419

Wildlife: Number struck

Visualization to show the months in which the maximum bird collisions happen. This mostly shows the migratory aspects of the birds in US.

Which Wildlife Size and at what Altitude collisions are costly?

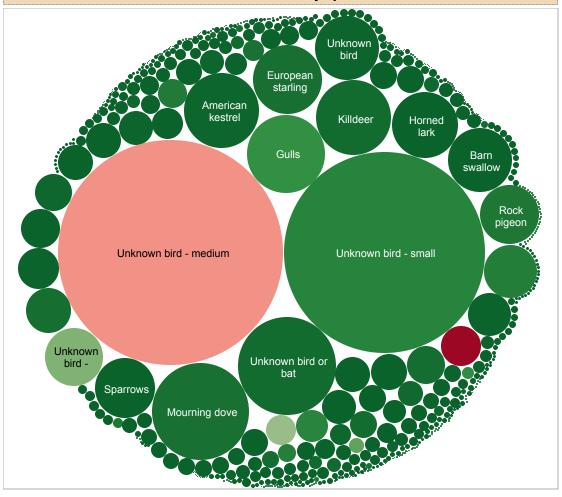
Large Medium



Visualization for what size of the bird, above what feet had the impact on the cost incurred.

Sum of Feet above ground for each Wildlife: Size. Color shows sum of Cost: Total \$. Size shows details about Wildlife: Size. The view is filtered on Wildlife: Size, which keeps Large, Medium and Small.

How does the collisions by species look?



Wildlife: Species. Color shows sum of Cost: Total \$. Size shows sum of Number of Records. The marks are labeled by Wildlife: Species. The data is filtered on FlightDate Year, count of Cost: Total \$, Action (When: Phase of flight, When: Time of day (group) 1), Action (Wildlife: Species), Action (Origin State, When: Time of day), Action (MONTH(FlightDate), Wildlife: Number struck), Action (Altitude bin), Action (MONTH(FlightDate), DAY(FlightDate), Wildlife: Number struck) and Action (Wildlife: Size). The FlightDate Year filter keeps 12 of 12 members. The count of Cost: Total \$ filter ranges from 0 to 23,416. The Action (When: Phase of flight, When: Time of day (group) 1) filter keeps 50 members. The Action (Wildlife: Species) filter keeps 609 members. The Action (Origin State, When: Time of day) filter keeps 306 members. The Action (MONTH(FlightDate), Wildlife: Number struck) filter keeps 56 members. The Action (Altitude bin) filter keeps 3 members. The Action (MONTH(FlightDate), DAY(FlightDate), Wildlife: Number struck) filter keeps 1,389 members. The Action (Wildlife: Size) filter keeps 4 members. The view is filtered on Wildlife: Species, which keeps 609 of 609 members.



Which birds caused maximum collisions and damage?					
Unknown bird - medium	Unknown bird or bat	Cost: Tota			
		0			
		U			
	Mourning dove				
	_				
	_				
	_				
	_				
	_				
	_				
	_				
	_				
	Gulls				
	300				
Unknown bird - small					
	American kestrel				
	American Result				
	Killdeer				

80,080,800

Visulization to show the Strike incidence and cost incurred on the basis of species collided with the aircraft.

Sum of Number of Records and sum of Cost: Total \$ for each Wildlife: Species.

	Which b	irds caus	ed maxir	num co	ollisio	ns and	damage	?			
European starling H	orned lark	Unknov	wn bird	Barn	swallow		Sparrows		Rock pi	geon	
Unknown bird - large		Hawks	Barn owl		llows	Pacific	Doves		stern dowlark		
Red-tailed hawk	American robin	Microbats	Great blue heron	Cattle	Bank					Snow	New
	Mallard	Ducks Tree swallo	Geese				Bald				
Ring-billed gull	Perching birds (y)	Common	Owls								
Eastern meadowlark	White-tailed deer	nighthawk	Purple martin	Red t							
	Turkey vulture	Short-eared owl	Zebra dove d Upland sandpi	Crow	S						
Herring gull	Chimney swift	Savannah sparrow	Americ coot Wester	an n							
Canada goose	Meadowlarks	Laughing g									
			free-tai	led							

Visulization to show the Strike incidence and cost incurred on the basis of species collided with the aircraft.

Sum of Number of Records and sum of Cost: Total \$ for each Wildlife: Species.

Cost: Total \$

0 80,080,800

Which altitude has caused maximum collisions?

Altitude bin

< 1000 ft	43,901
> 1000 ft	11,548
Unknown	43,955

Sum of Number of Records broken down by Altitude bin. Color shows sum of Number of Records. The data is filtered on FlightDate Year, Action (MONTH(Flight-Date), Wildlife: Number struck), Action (When: Phase of flight, When: Time of day (group) 1), Action (Wildlife: Species), Action (MONTH(FlightDate),DAY(Flight-Date), Wildlife: Number struck) and Action (Wildlife: Size). The Flight-Date Year filter keeps 12 of 12 members. The Action (MONTH(FlightDate), Wildlife: Number struck) filter keeps 56 members. The Action (When: Phase of flight, When: Time of day (group) 1) filter keeps 50 members. The Action (Wildlife: Species) filter keeps 609 members. The Action (MONTH(FlightDate),DAY(Flight-Date), Wildlife: Number struck) filter keeps 1,389 members. The Action (Wildlife: Size) filter keeps 4 members. The view is filtered on Altitude bin, which keeps < 1000 ft, > 1000 ft and Unknown.

Number of Records



Other misc info				
Count of Number of Records	99,404			
Count of Number of human fatalities	1,092			
Count of Number of people injured	107			
Avg. Feet above ground	855			
Max. Miles from airport	1,300			

Count of Number of Records, count of Number of human fatalities, count of Number of people injured, Avg. Feet above ground and Max.
Miles from airport. The data is filtered on Flight-Date Year, Action (MONTH(Flight-Date), Wildlife: Number struck), Action (When: Phase of flight, When: Time of day (group) 1), Action (Altitude bin), Action (MONTH(Flight-Date),DAY(FlightDate),Wildlife: Number struck) and Action (Wildlife: Size). The FlightDate Year filter keeps 12 of 12 members. The Action (MONTH(FlightDate), Wildlife: Number struck) filter keeps 56 members. The Action (When: Phase of flight, When: Time of day (group) 1) filter keeps 50 members. The Action (Altitude bin) filter keeps 3 members. The Action (MONTH(FlightDate), DAY(FlightDate), Wildlife: Number struck) filter keeps 1,389 members. The Action (Wildlife: Size) filter keeps 4 members.

What is the damage caused by birds? [Analysis and drilldown] Click on any datapoint or color in any chart to see its distribution and variation across all the visualization aspects in this Dashboard. What cost is incurred with strikes in various states? Which birds caused maximum collisions and damage? Inknown bird - medium Unknown bird or bat European starling Mourning dove Homed lark Unknown bird - small Year of FlightDate Red-tailed hawk Ducks Unknown bird Ring-billed gull Barn swallow Eastern meadowlark Monthly Collisions [to determine if its due to migration of birds] How does the collisions by species look? What is the impact of collision time on the phase of the flight? Null Approach 400 -Take-off run Landing Roll § 300-Climb Descent ____ En Route Landing | Taxi Parked 15K 20K Number of Records 25K 6 17 28 6 17 28 6 17 28 6 17 28 6 17 28 6 17 28 6 17 28 6 17 28 6 17 28 6 17 28 7 19 31 6 17 28 6 17 28 6 17 28 6 17 28 Other misc info Which Wildlife Size and at what Altitude collisions are costly? Which altitude has caused maximum colli-99,404 Wildlife: Size

sions?

43,901

11,548

43,955

Altitude bin

< 1000 ft

> 1000 ft

Unknown

Medium

Count of Number of human fatalities Count of Number of people injured

Avg. Feet above ground

Max. Miles from airport