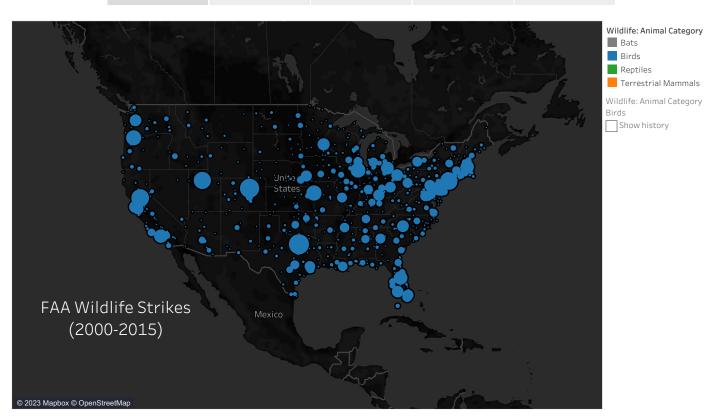
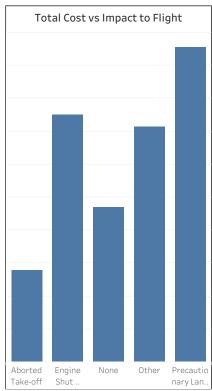
Cover Page Significant Trends Forecasting (Bonus)Impact across States



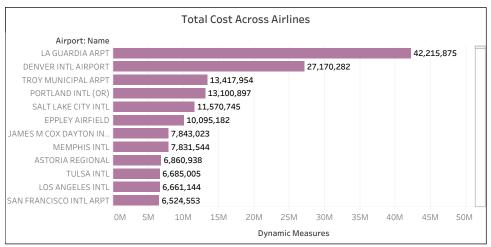
| States |
|--------|
|--------|



Dynamic Dimension Parameter Impact to Flight

Dynamic Measures Parameter

Total Cost

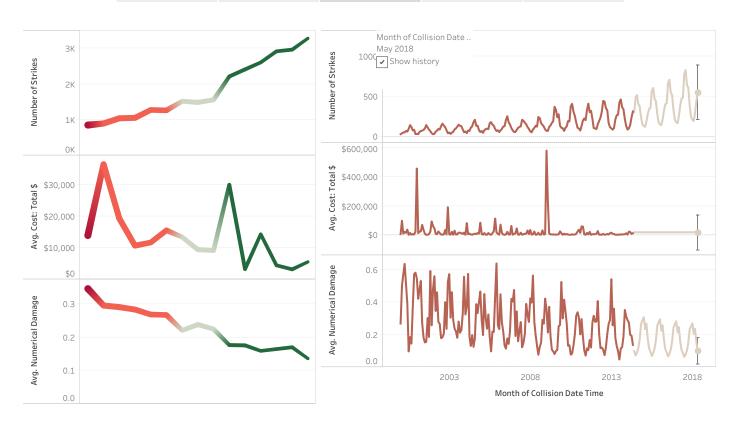


Pattern of Bird Strikes

Wildlife: Animal Category / Collision Year / Collision Month

Birds
2g00 | 2g01 | 2g02 | 2g03 | 2g04 | 2g05 | 2g06 | 2g07 | 2g08 | 2g09 | 2g10 | 2g11 | 2g12 | 2g13 | 2g14 | 25

Cover Page Significant Trends Forecasting (Bonus)Impact across States

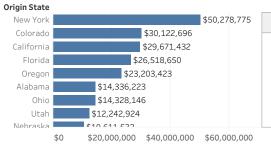


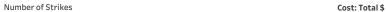
| Cover Page | Significant Trends | Forecasting | (Bonus)Impact across States | |
|------------|--------------------|-------------|--------------------------------|--|
| | | | | |

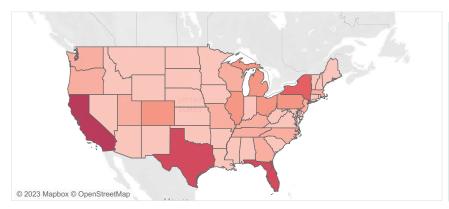
Frequency across States

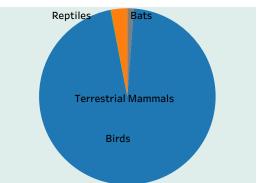
Wildlife: An.. Origin State Birds California 2,902 Texas 2,180 2,157 Florida New York 2,078 1,229 Pennsylvania 1,089 Colorado Ohio 1,059 Illinois 1,059 Michigan 500 1000 1500 2000 2500 3000

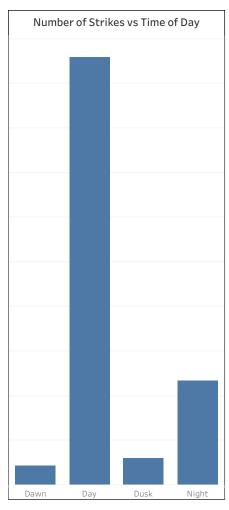
Cost Across States





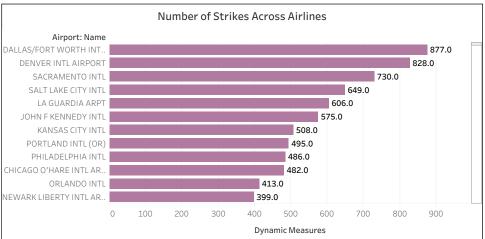




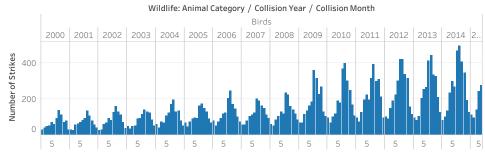


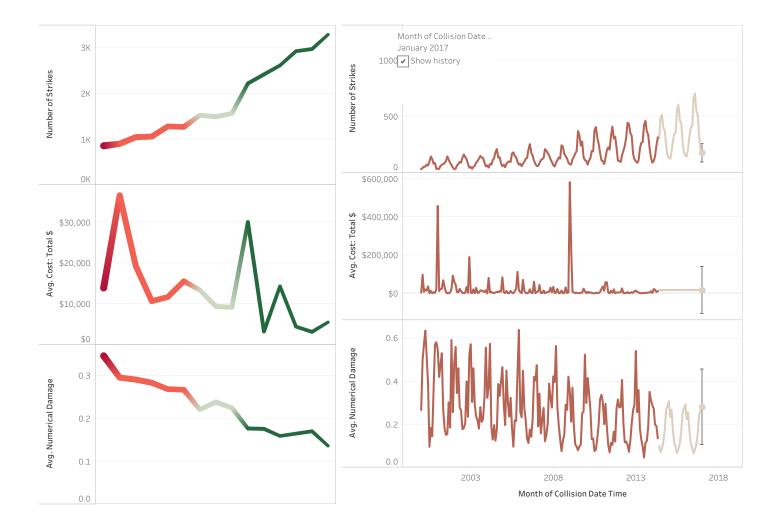
Dynamic Dimension Parameter Time of Day

Dynamic Measures Parameter Number of Strikes



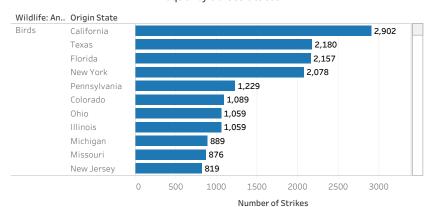
Pattern of Bird Strikes

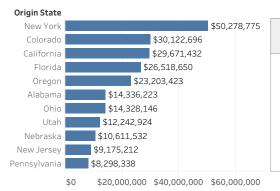




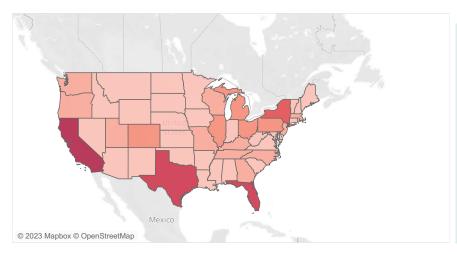
Frequency across States

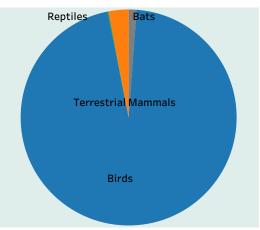
Cost Across States

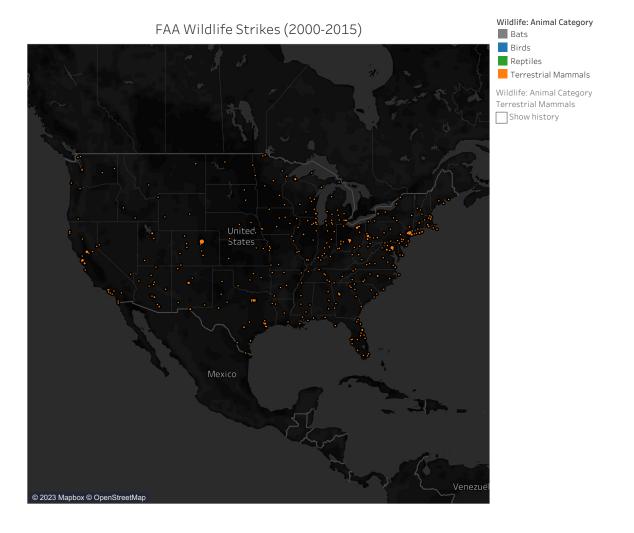


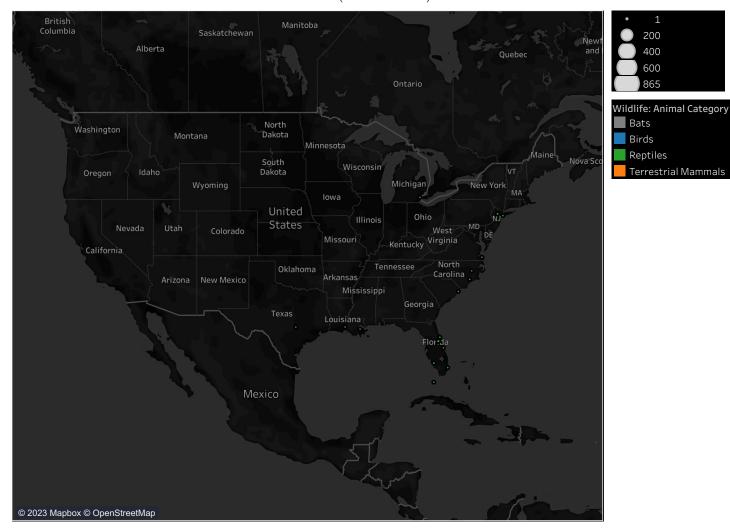


Cost: Total \$



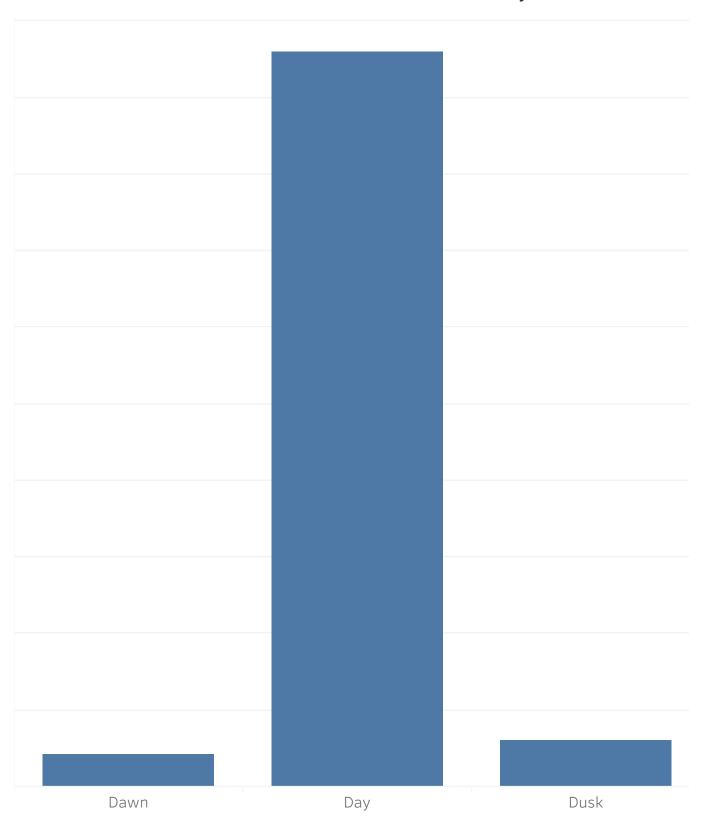






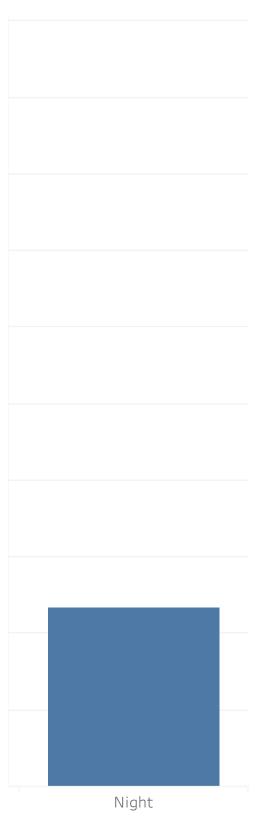
Map based on Longitude (generated) and Latitude (generated). Color shows details about Wildlife: Animal Category. Size shows count of Numerical Damage. Details are shown for Airport: Code. The data is filtered on Action (Wildlife: Animal Category), which keeps 4 members.

Number of Strikes vs Time of Day

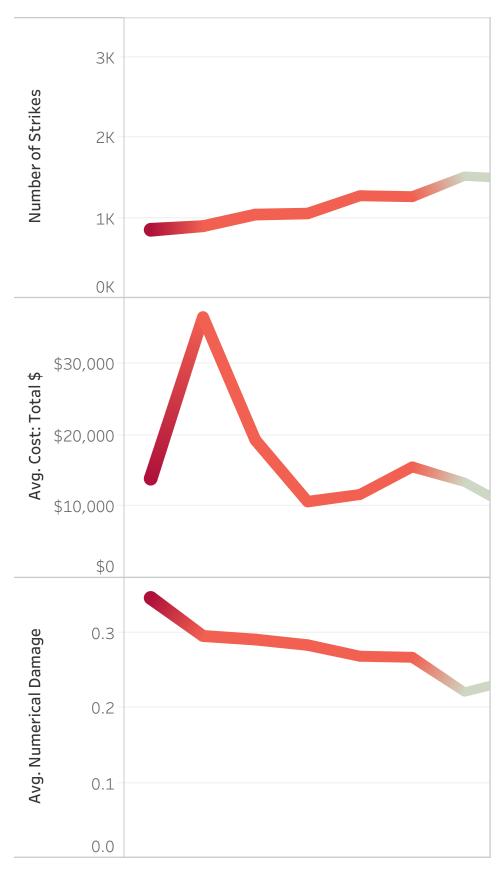


Sum of Dynamic Measures for each Dynamic Dimension. The data is filtered on Aircraft: Type and Aircraft: Number of engines. The Aircraft: Type filter excludes Null. The Aircraft: Number of engines filter has multiple members selected. The view is filtered on Dynamic Dimension and sum of Dynamic Measures. The Dynamic Dimension filter excludes Null and Local. The sum of Dynamic Measures filter keeps non-Null values only.

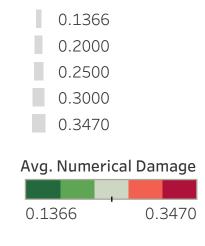
Number of Strikes vs Time of Day

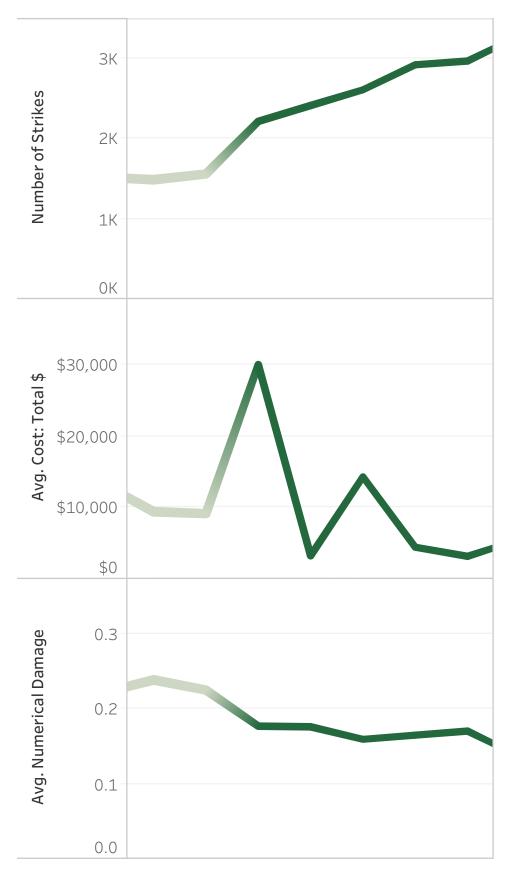


Sum of Dynamic Measures for each Dynamic Dimension. The data is filtered on Aircraft: Type and Aircraft: Number of engines. The Aircraft: Type filter excludes Null. The Aircraft: Number of engines filter has multiple members selected. The view is filtered on Dynamic Dimension and sum of Dynamic Measures. The Dynamic Dimension filter excludes Null and Local. The sum of Dynamic Measures filter keeps non-Null values only.

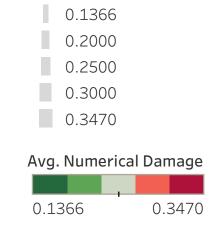


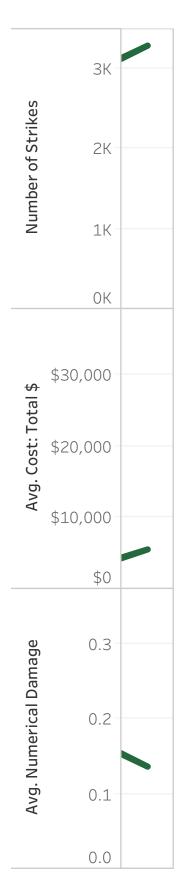
The trends of sum of Number of Strikes, average of Cost: Total \$ and average of Numerical Damage for Collision Year. Color shows average of Numerical Damage. Size shows average of Numerical Damage. The view is filtered on Collision Year, which excludes 2015.

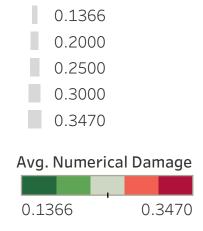




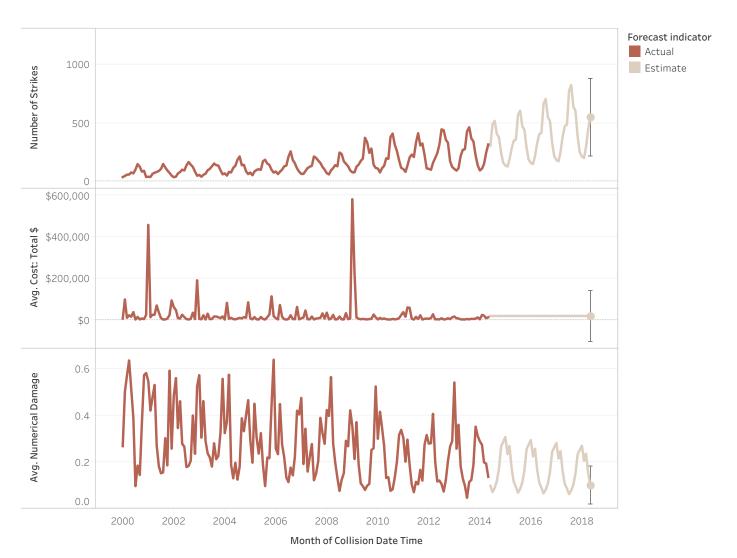
The trends of sum of Number of Strikes, average of Cost: Total \$ and average of Numerical Damage for Collision Year. Color shows average of Numerical Damage. Size shows average of Numerical Damage. The view is filtered on Collision Year, which excludes 2015.



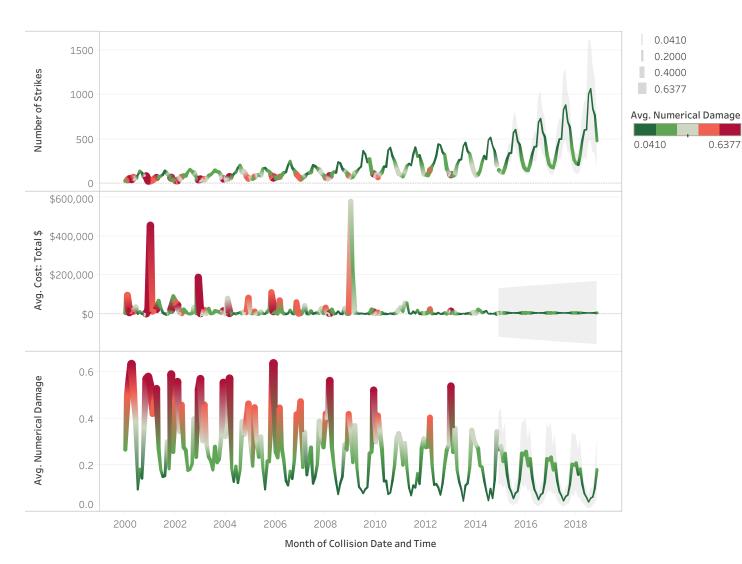




The trends of sum of Number of Strikes, average of Cost: Total \$ and average of Numerical Damage for Collision Year. Color shows average of Numerical Damage. Size shows average of Numerical Damage. The view is filtered on Collision Year, which excludes 2015.

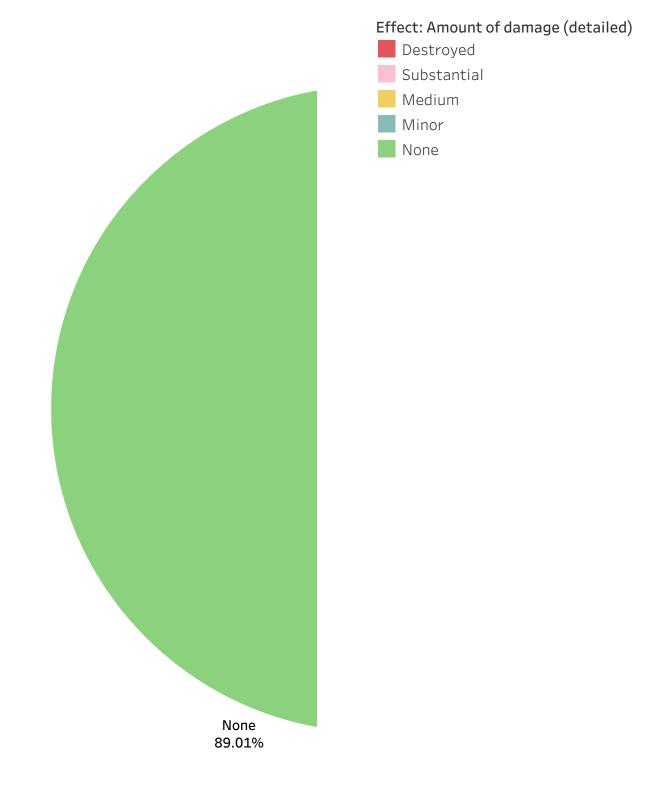


The plots of sum of Number of Strikes (actual & forecast), average of Cost: Total \$ (actual & forecast) and average of Numerical Damage (actual & forecast) for Collision Date Time Month. Color shows details about Forecast indicator.



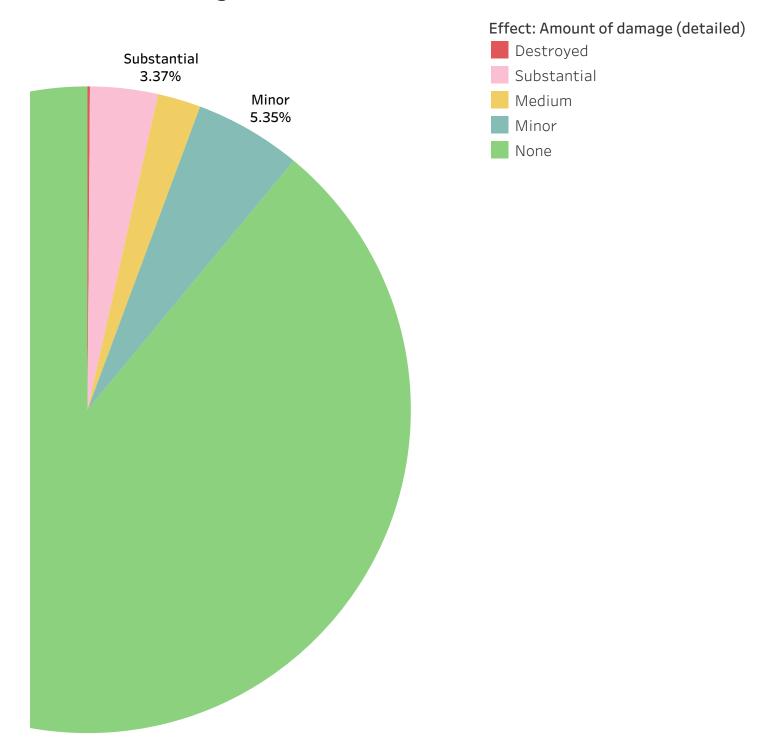
The trends of sum of Number of Strikes (actual & forecast), average of Cost: Total \$ (actual & forecast) and average of Numerical Damage (actual & forecast) for Collision Date and Time Month. Color shows average of Numerical Damage (actual & forecast). Size shows average of Numerical Damage (actual & forecast). Details are shown for Forecast indicator. The data is filtered on Collision Year, which excludes 2015.

Piechart: Damage



Effect: Amount of damage (detailed) and % of Total Count of Number of Strikes. Color shows details about Effect: Amount of damage (detailed). The marks are labeled by Effect: Amount of damage (detailed) and % of Total Count of Number of Strikes.

Piechart: Damage



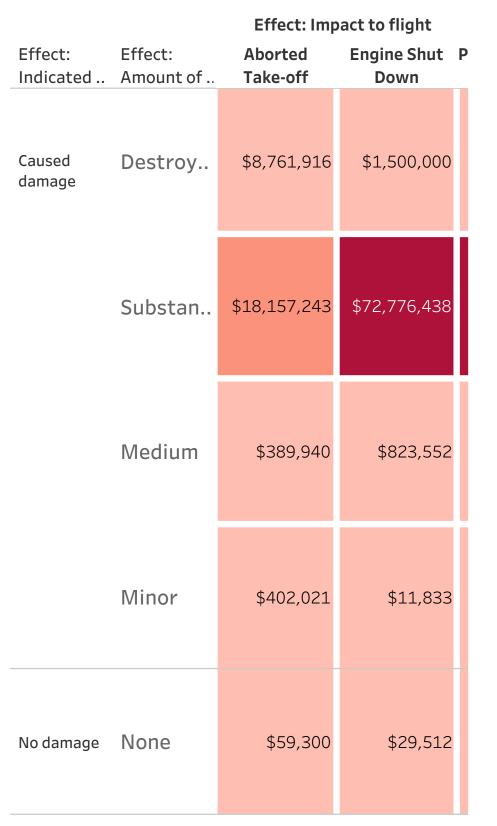
Effect: Amount of damage (detailed) and % of Total Count of Number of Strikes. Color shows details about Effect: Amount of damage (detailed). The marks are labeled by Effect: Amount of damage (detailed) and % of Total Count of Number of Strikes.

Piechart: Damage

Effect: Amount of damage (detailed) Destroyed Substantial Medium Minor None

Effect: Amount of damage (detailed) and % of Total Count of Number of Strikes. Color shows details about Effect: Amount of damage (detailed). The marks are labeled by Effect: Amount of damage (detailed) and % of Total Count of Number of Strikes.

Cost - Impact vs Damage



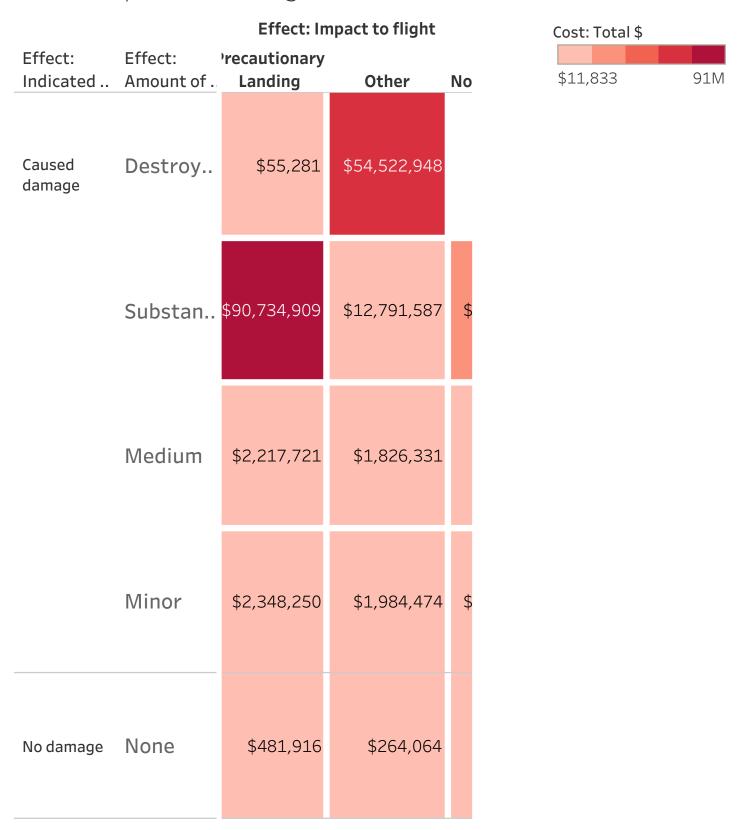
Cost: Total \$

91M

\$11,833

Sum of Cost: Total \$ broken down by Effect: Impact to flight vs. Effect: Indicated Damage and Effect: Amount of damage (detailed). Color shows sum of Cost: Total \$. The marks are labeled by sum of Cost: Total \$. The view is filtered on Effect: Impact to flight, which excludes Null.

Cost - Impact vs Damage



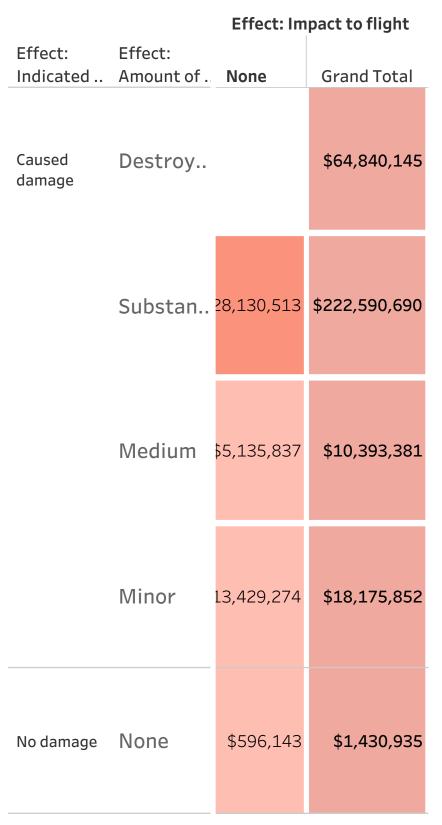
Sum of Cost: Total \$ broken down by Effect: Impact to flight vs. Effect: Indicated Damage and Effect: Amount of damage (detailed). Color shows sum of Cost: Total \$. The marks are labeled by sum of Cost: Total \$. The view is filtered on Effect: Impact to flight, which excludes Null.

Cost - Impact vs Damage

Cost: Total \$

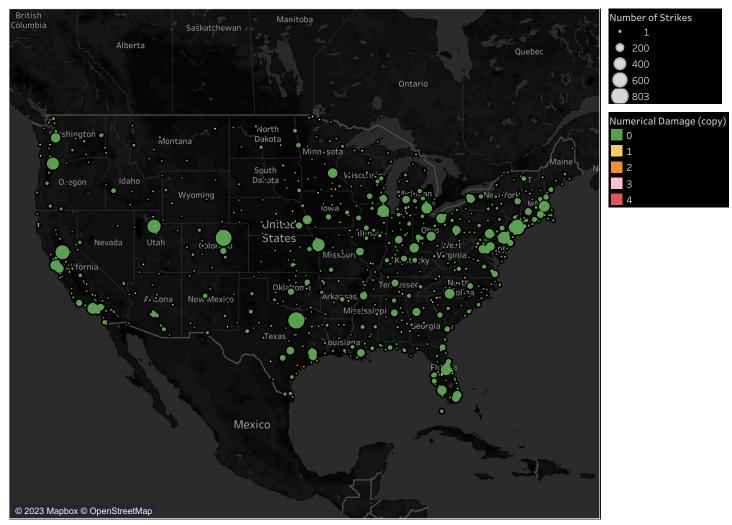
91M

\$11,833

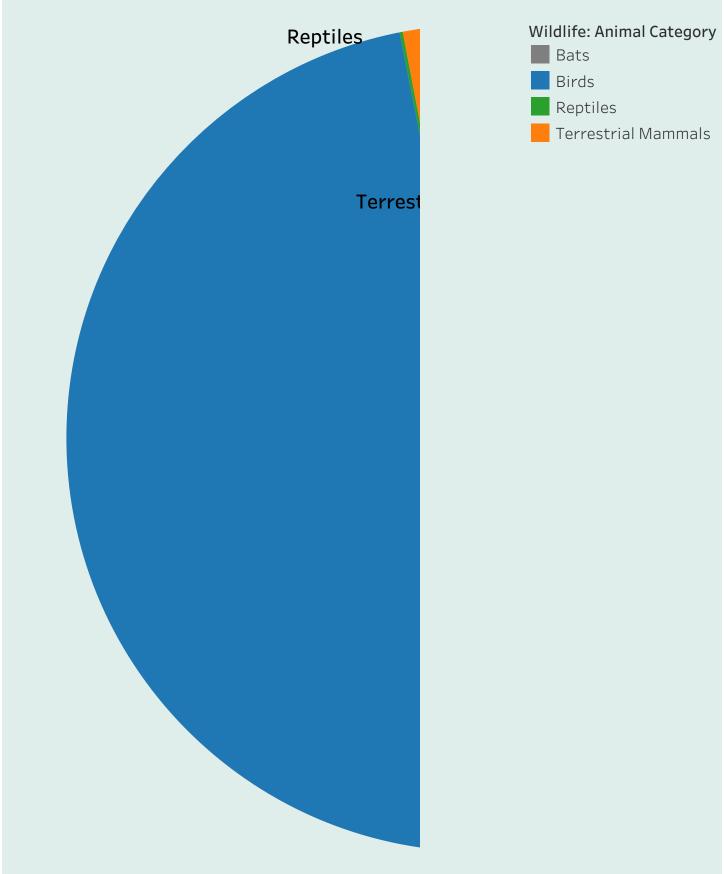


Sum of Cost: Total \$ broken down by Effect: Impact to flight vs. Effect: Indicated Damage and Effect: Amount of damage (detailed). Color shows sum of Cost: Total \$. The marks are labeled by sum of Cost: Total \$. The view is filtered on Effect: Impact to flight, which excludes Null.

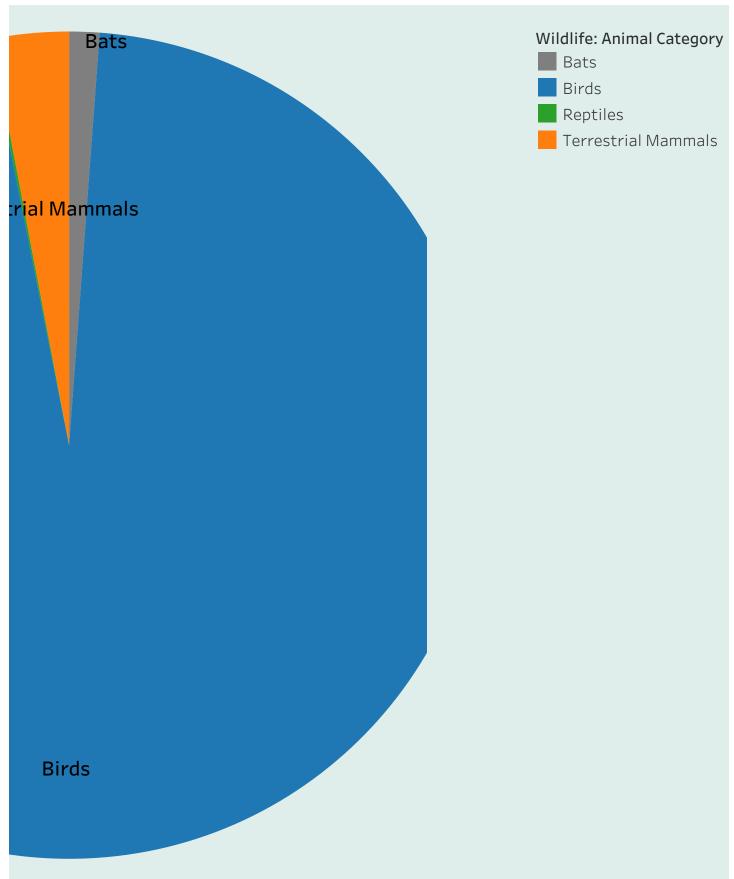
Map Location density



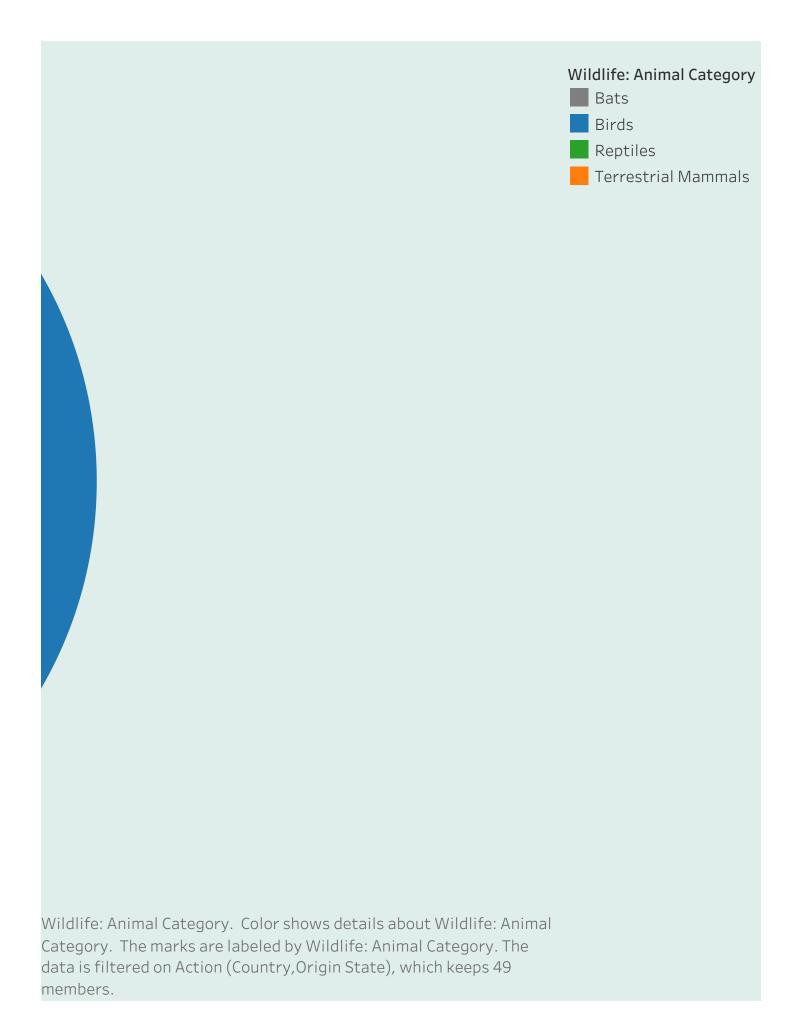
Map based on Longitude (generated) and Latitude (generated). Color shows details about Numerical Damage (copy). Size shows sum of Number of Strikes. Details are shown for Airport: Code.



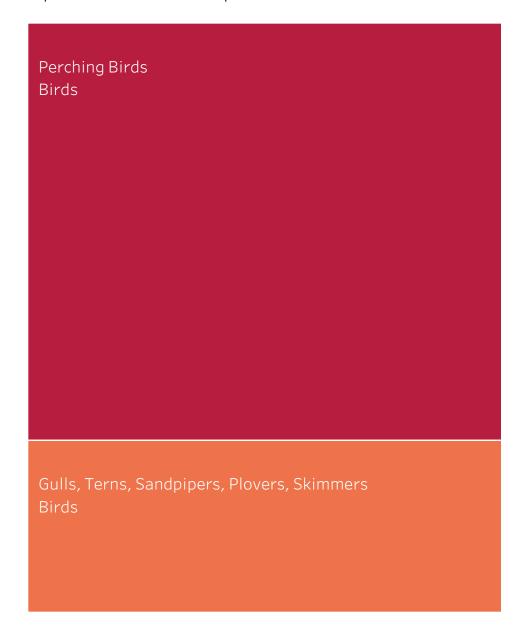
Wildlife: Animal Category. Color shows details about Wildlife: Animal Category. The marks are labeled by Wildlife: Animal Category. The data is filtered on Action (Country, Origin State), which keeps 49 members.



Wildlife: Animal Category. Color shows details about Wildlife: Animal Category. The marks are labeled by Wildlife: Animal Category. The data is filtered on Action (Country, Origin State), which keeps 49 members.



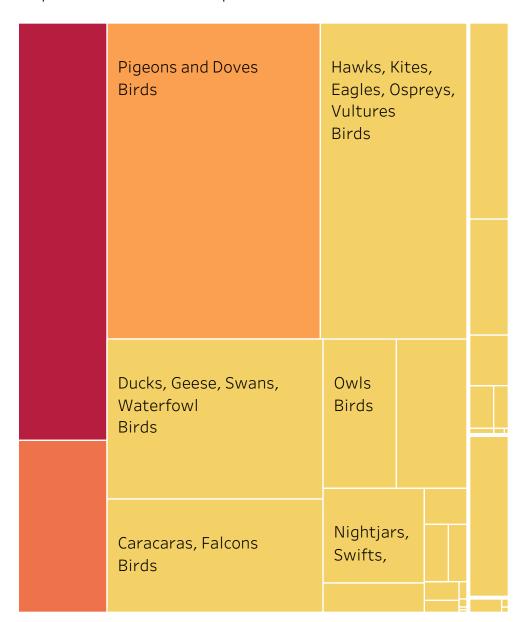
Species Treemap



Wildlife: Animal Category, Wildlife: Species Order and % of Total Number of Strikes. Color shows sum of Number of Strikes. Size shows sum of Number of Strikes. The marks are labeled by Wildlife: Animal Category, Wildlife: Species Order and % of Total Number of Strikes. The view is filtered on Wildlife: Animal Category, which keeps Bats, Birds, Reptiles and Terrestrial Mammals.

Number of Strikes 1 11,697

Species Treemap



Number of Strikes

11,697

Wildlife: Animal Category, Wildlife: Species Order and % of Total Number of Strikes. Color shows sum of Number of Strikes. Size shows sum of Number of Strikes. The marks are labeled by Wildlife: Animal Category, Wildlife: Species Order and % of Total Number of Strikes. The view is filtered on Wildlife: Animal Category, which keeps Bats, Birds, Reptiles and Terrestrial Mammals.

| Wildlife: Animal | Destroyed | Substantial |
|------------------|--------------|---------------|
| Bats | \$23,387 | |
| Birds | \$43,298,867 | \$216,342,394 |
| Reptiles | | |
| Terrestrial Mamm | \$23,003,901 | \$8,439,549 |
| Grand Total | \$66,326,155 | \$224,781,943 |

Cost: Total \$
\$0 216M

Sum of Cost: Total \$ broken down by Effect: Amount of damage (detailed) vs. Wildlife: Animal Category. Color shows sum of Cost: Total \$. The marks are labeled by sum of Cost: Total \$. The data is filtered on Wildlife: Species Order and Action (Wildlife: Animal Category). The Wildlife: Species Order filter keeps 31 of 31 members. The Action (Wildlife: Animal Category) filter keeps 4 members. The view is filtered on Wildlife: Animal Category, which keeps Bats, Birds, Reptiles and Terrestrial Mammals.

| Wildlife: Animal I | Medium | Minor |
|--------------------|--------------|--------------|
| Bats | | |
| Birds | \$10,445,653 | \$17,392,612 |
| Reptiles | | |
| Terrestrial Mamm | \$618,219 | \$1,165,370 |
| Grand Total | \$11,063,872 | \$18,557,982 |

Cost: Total \$
\$0 216M

Sum of Cost: Total \$ broken down by Effect: Amount of damage (detailed) vs. Wildlife: Animal Category. Color shows sum of Cost: Total \$. The marks are labeled by sum of Cost: Total \$. The data is filtered on Wildlife: Species Order and Action (Wildlife: Animal Category). The Wildlife: Species Order filter keeps 31 of 31 members. The Action (Wildlife: Animal Category) filter keeps 4 members. The view is filtered on Wildlife: Animal Category, which keeps Bats, Birds, Reptiles and Terrestrial Mammals.

| Wildlife: Animal r | None | Grand Total |
|--------------------|-------------|---------------|
| Bats | \$4,955 | \$28,342 |
| Birds | \$1,414,391 | \$288,893,917 |
| Reptiles | \$0 | \$0 |
| Terrestrial Mamm | \$11,589 | \$33,238,628 |
| Grand Total | \$1,430,935 | \$322,160,887 |

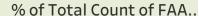
Cost: Total \$
\$0 216M

Sum of Cost: Total \$ broken down by Effect: Amount of damage (detailed) vs. Wildlife: Animal Category. Color shows sum of Cost: Total \$. The marks are labeled by sum of Cost: Total \$. The data is filtered on Wildlife: Species Order and Action (Wildlife: Animal Category). The Wildlife: Species Order filter keeps 31 of 31 members. The Action (Wildlife: Animal Category) filter keeps 4 members. The view is filtered on Wildlife: Animal Category, which keeps Bats, Birds, Reptiles and Terrestrial Mammals.

Wildlife Pattern

| | i ime (| от рау |
|----------------------|---------|--------|
| Wildlife: Animal Cat | Dawn | Day [|
| Bats | 4 | 41 |
| Birds | 881 | 20,615 |
| Reptiles | | 27 |
| Terrestrial Mammals | 35 | 211 |
| Grand Total | 920 | 20 894 |

Sum of Number of Strikes broken down by Time of Day vs. Wildlife: Animal Category. Color shows % of Total Count of FAA Wildlife Strikes. The marks are labeled by sum of Number of Strikes. The view is filtered on Wildlife: Animal Category, which keeps Bats, Birds, Reptiles and Terrestrial Mammals.





Wildlife Pattern

| | Time of Day | | |
|----------------------|-------------|---------|---|
| Wildlife: Animal Cat | Dusk | Night G | ĺ |
| Bats | 14 | 273 | |
| Birds | 1,313 | 4,280 | |
| Reptiles | 2 | 4 | |
| Terrestrial Mammals | 53 | 545 | |
| Grand Total | 1.382 | 5.102 | |

545 ,102 Idlife:

% of Total Count of FAA..

82.23%

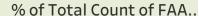
1.20%

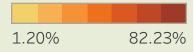
Sum of Number of Strikes broken down by Time of Day vs. Wildlife: Animal Category. Color shows % of Total Count of FAA Wildlife Strikes. The marks are labeled by sum of Number of Strikes. The view is filtered on Wildlife: Animal Category, which keeps Bats, Birds, Reptiles and Terrestrial Mammals.

Wildlife Pattern

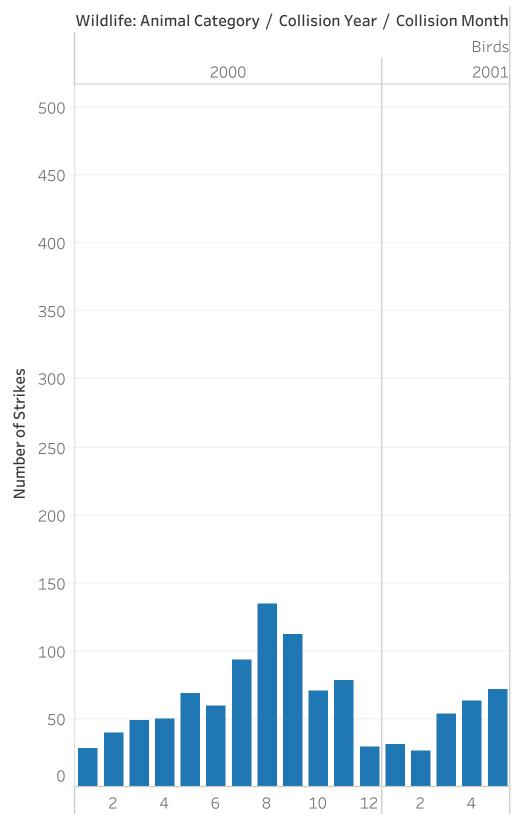
| | Time of Day |
|----------------------|-------------|
| Wildlife: Animal Cat | Grand Total |
| Bats | 332 |
| Birds | 27,089 |
| Reptiles | 33 |
| Terrestrial Mammals | 844 |
| Grand Total | 28,298 |

Sum of Number of Strikes broken down by Time of Day vs. Wildlife: Animal Category. Color shows % of Total Count of FAA Wildlife Strikes. The marks are labeled by sum of Number of Strikes. The view is filtered on Wildlife: Animal Category, which keeps Bats, Birds, Reptiles and Terrestrial Mammals.





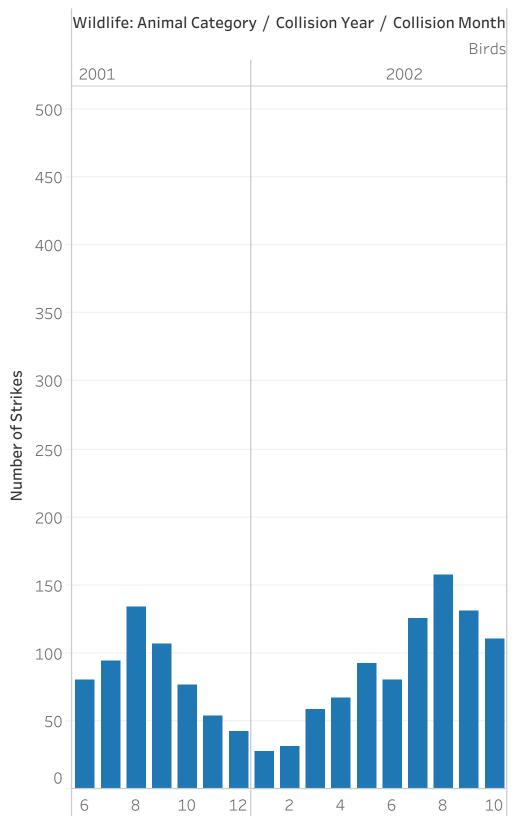
Pattern of Bird Strikes



Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.

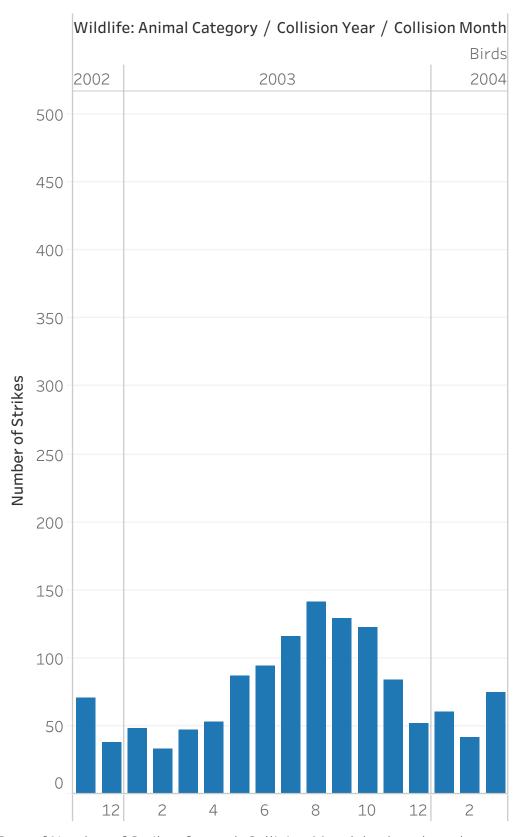
Wildlife: Animal Category

Birds



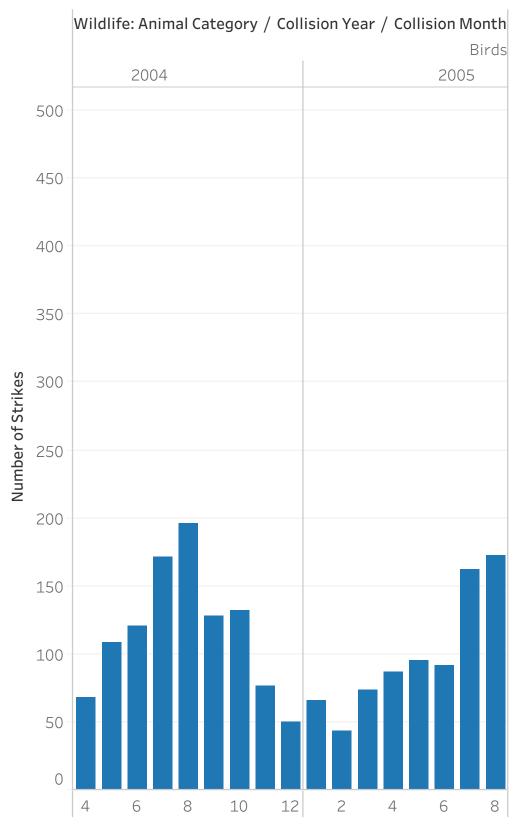
Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.

Wildlife: Animal Category



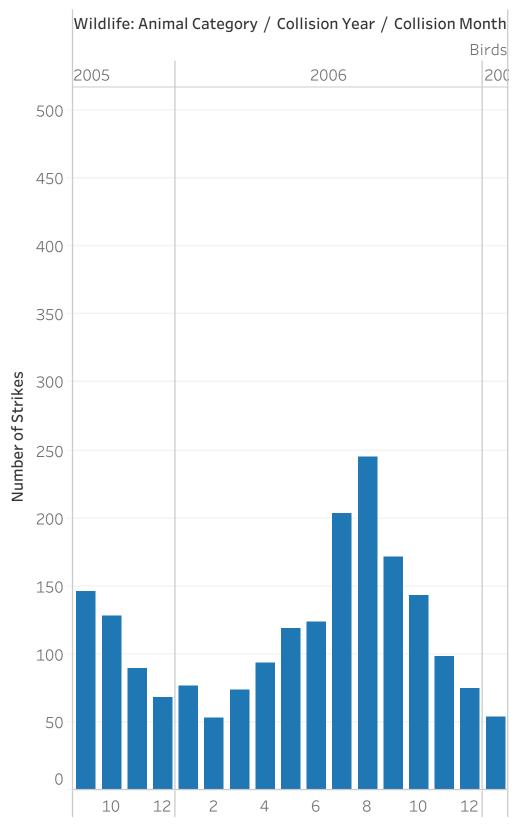
Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.

Wildlife: Animal Category



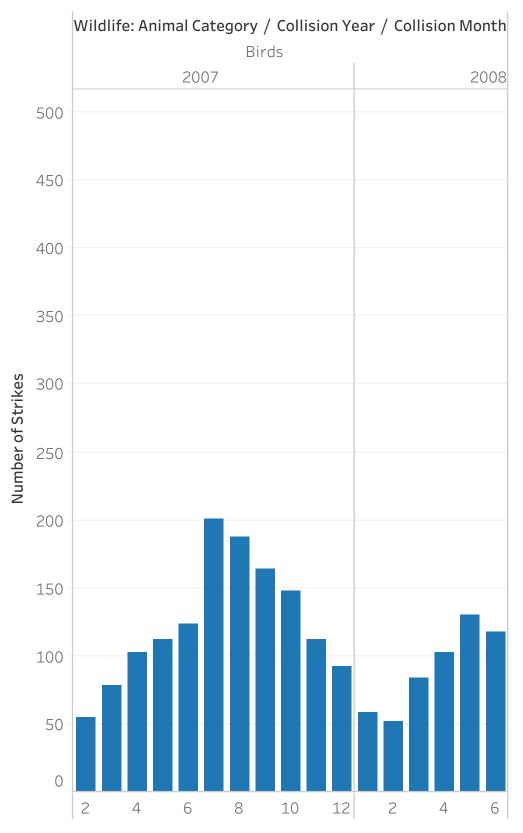
Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.

Wildlife: Animal Category

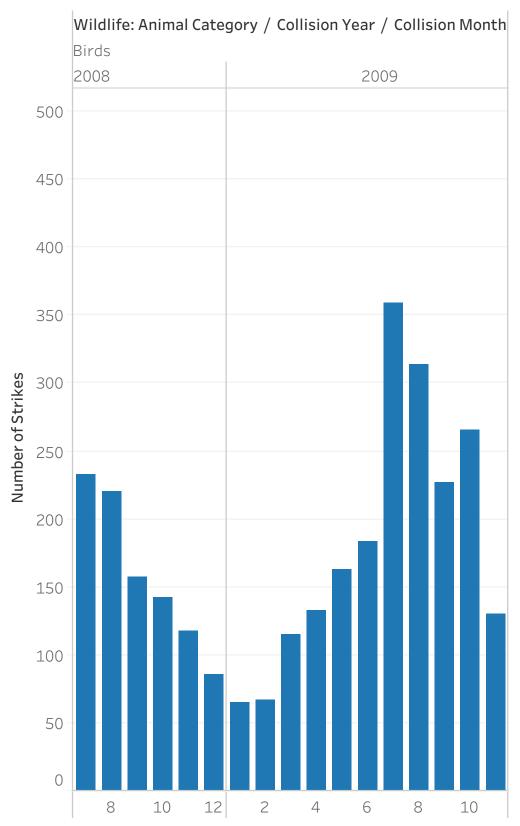


Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.

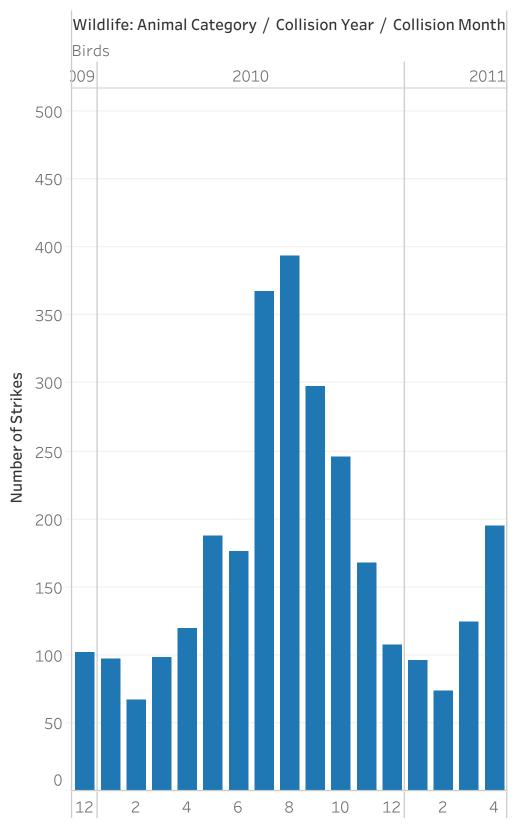
Wildlife: Animal Category



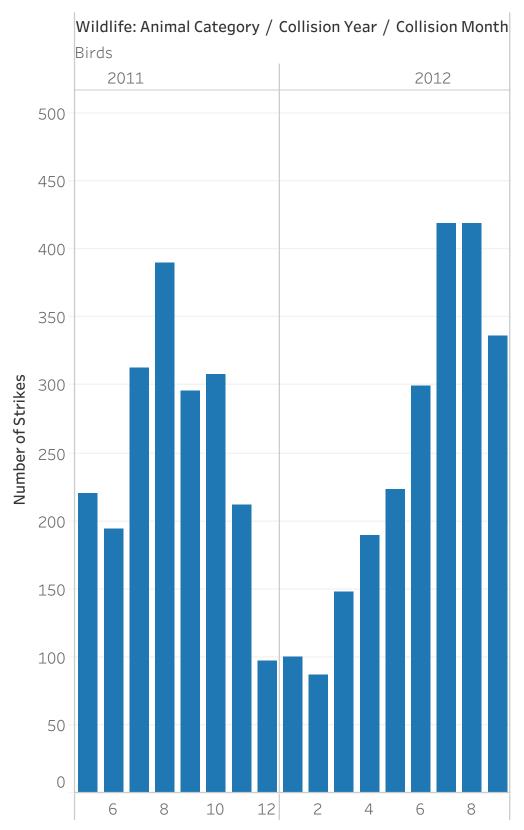
Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.



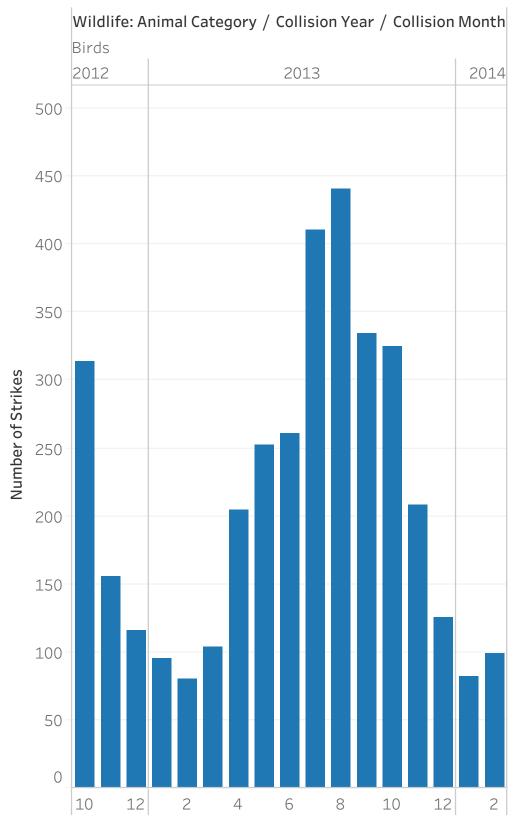
Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.



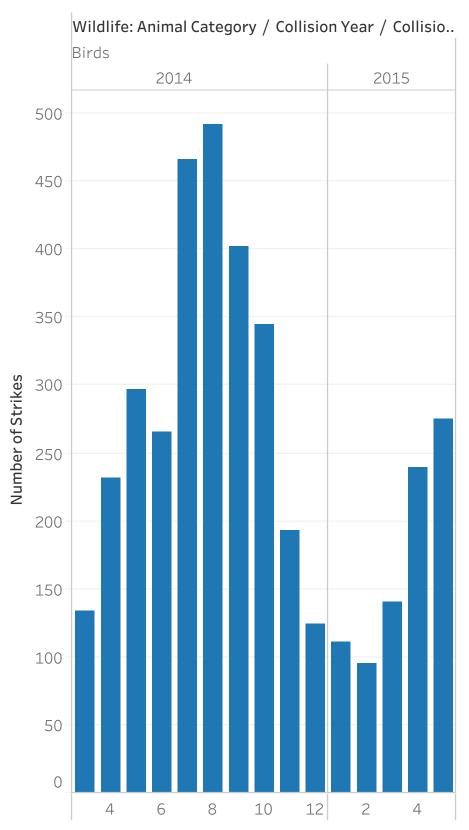
Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.



Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.



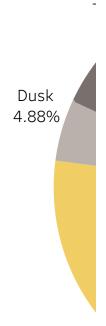
Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.



Sum of Number of Strikes for each Collision Month broken down by Wildlife: Animal Category and Collision Year. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Birds.

Piechart: Time of Day

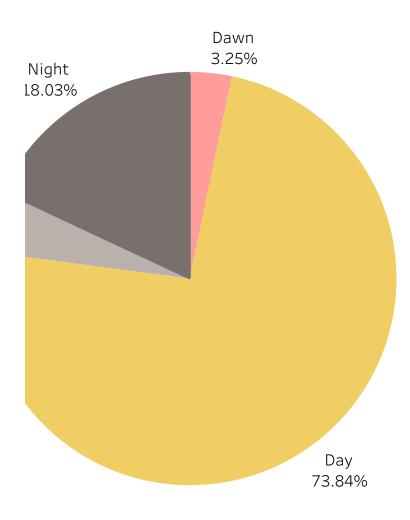




Time of Day and % of Total Count of FAA Wildlife Strikes. Color shows details about Time of Day. The marks are labeled by Time of Day and % of Total Count of FAA Wildlife Strikes.

Piechart: Time of Day





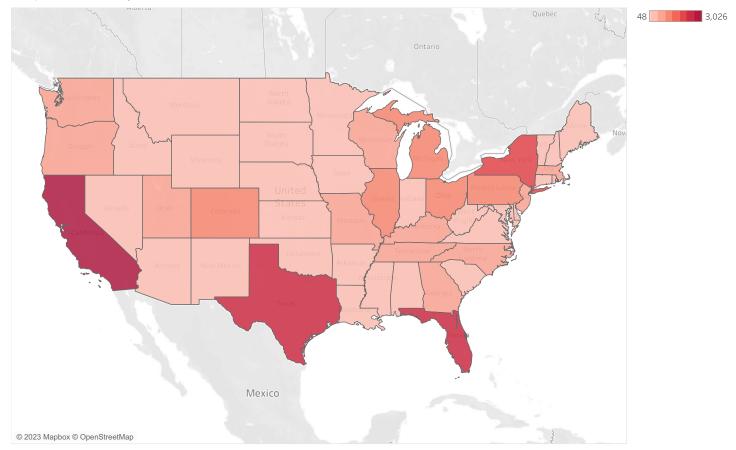
Time of Day and % of Total Count of FAA Wildlife Strikes. Color shows details about Time of Day. The marks are labeled by Time of Day and % of Total Count of FAA Wildlife Strikes.

Piechart: Time of Day

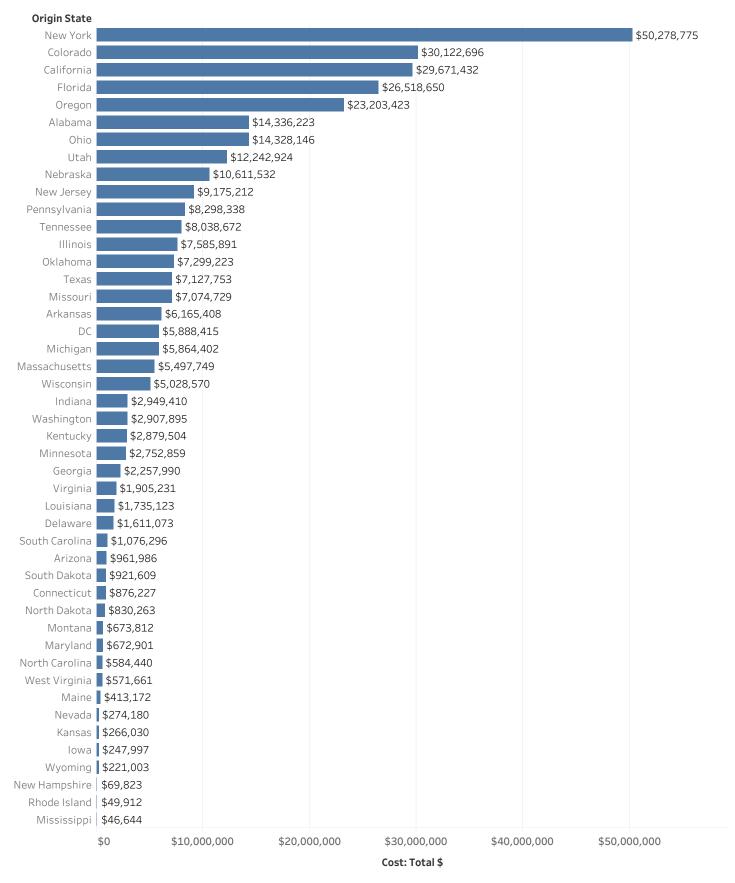
Dawn
Day
Dusk
Night

Time of Day and % of Total Count of FAA Wildlife Strikes. Color shows details about Time of Day. The marks are labeled by Time of Day and % of Total Count of FAA Wildlife Strikes.

Map State Density



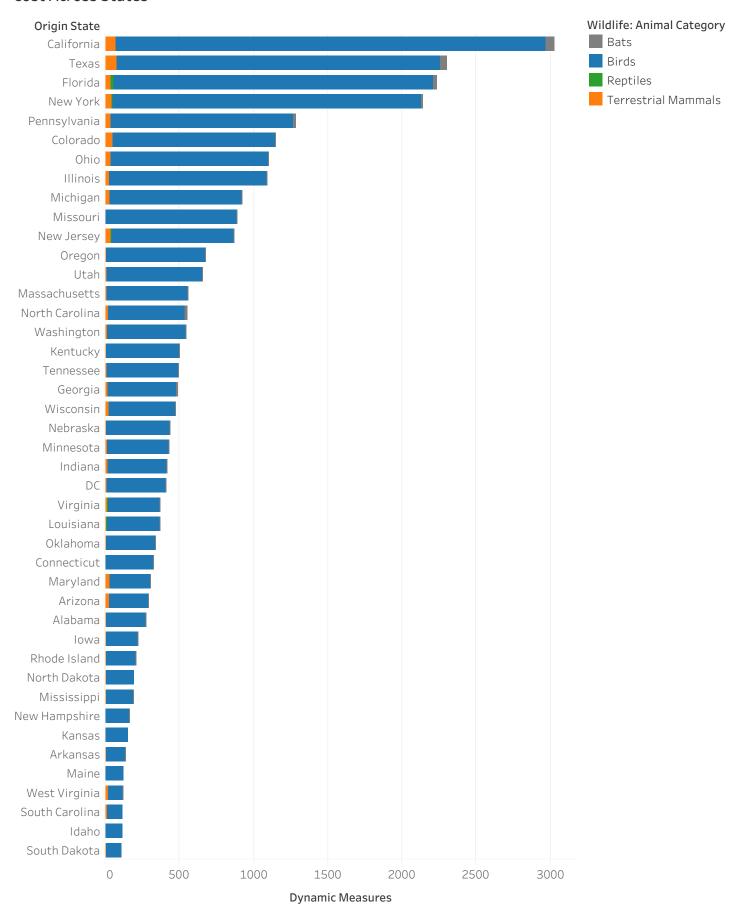
 $Map\ based\ on\ Longitude\ (generated)\ and\ Latitude\ (generated).\ Color\ shows\ sum\ of\ Number\ of\ Strikes.\ Details\ are\ shown\ for\ Origin\ State\ and\ Country.$

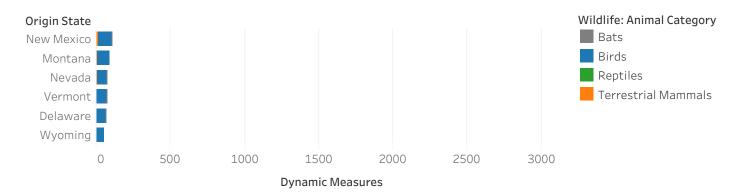


Sum of Cost: Total \$ for each Origin State. The marks are labeled by sum of Cost: Total \$. The data is filtered on Action (Country, Origin State) and Action (Wildlife: Animal Category). The Action (Country, Origin State) filter keeps 49 members. The Action (Wildlife: Animal Category) filter keeps 4 members.



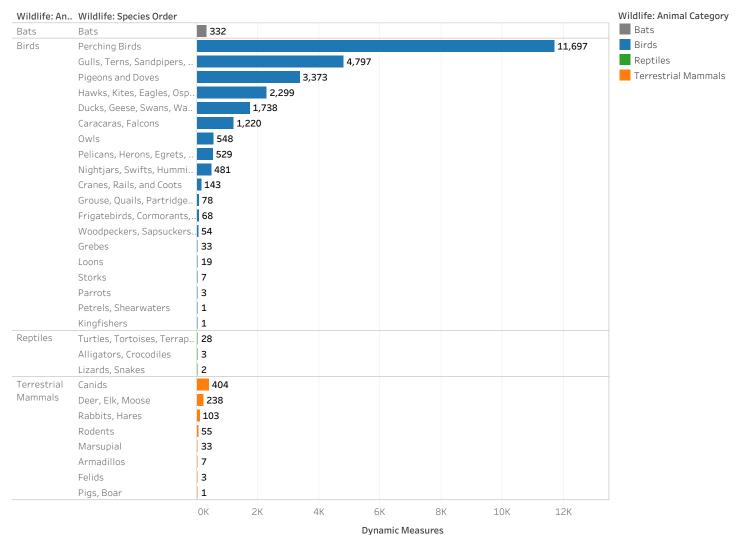
Sum of Cost: Total \$ for each Origin State. The marks are labeled by sum of Cost: Total \$. The data is filtered on Action (Country, Origin State) and Action (Wildlife: Animal Category). The Action (Country, Origin State) filter keeps 49 members. The Action (Wildlife: Animal Category) filter keeps 4 members.



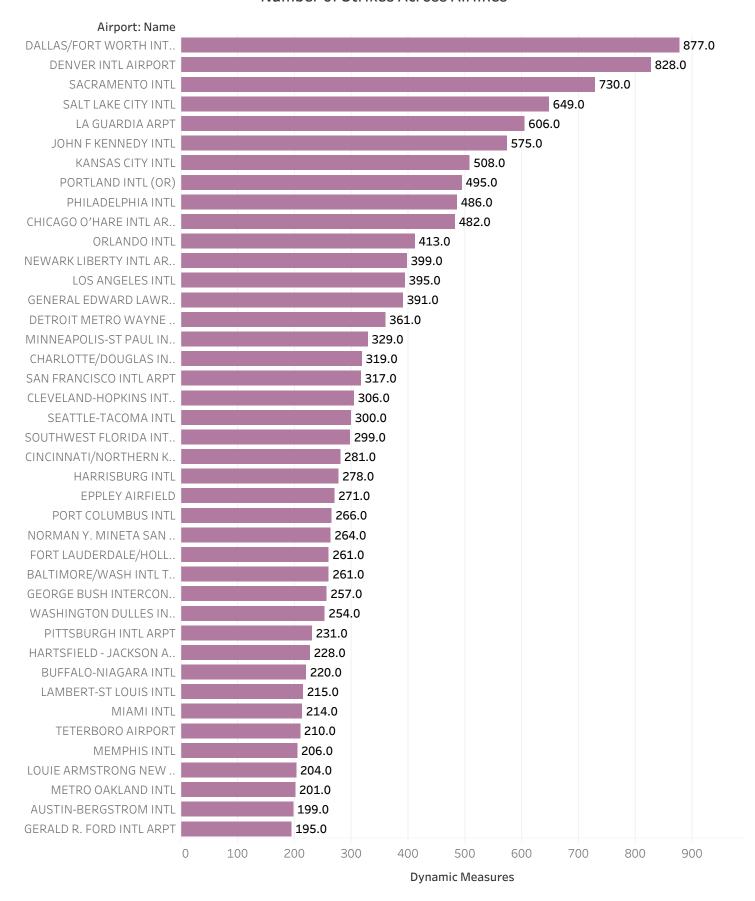


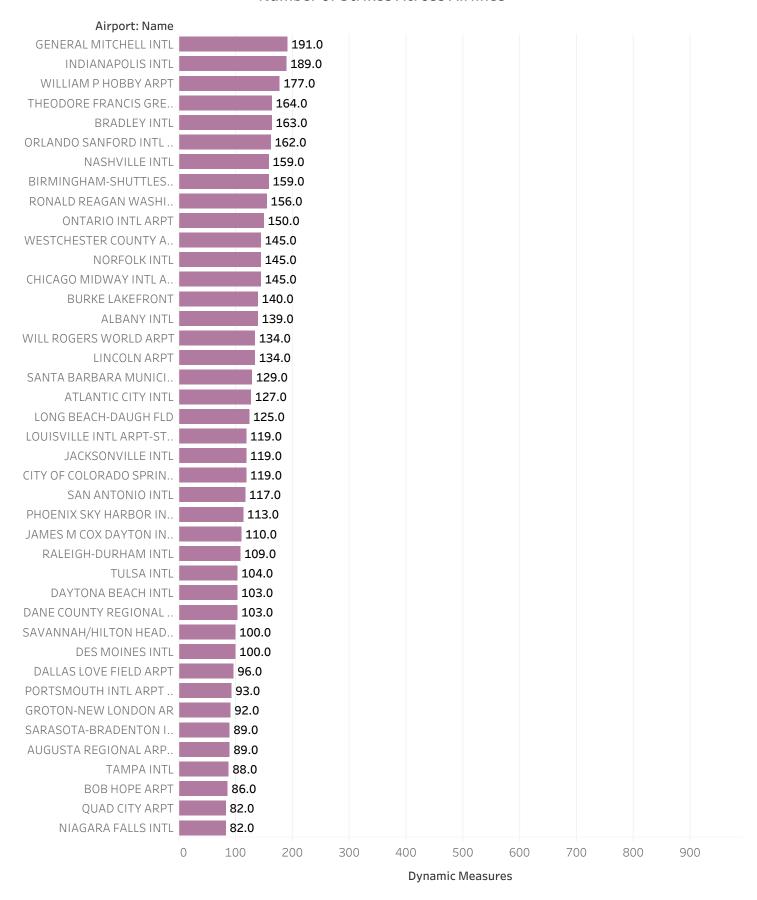
Sum of Dynamic Measures for each Origin State. Color shows details about Wildlife: Animal Category.

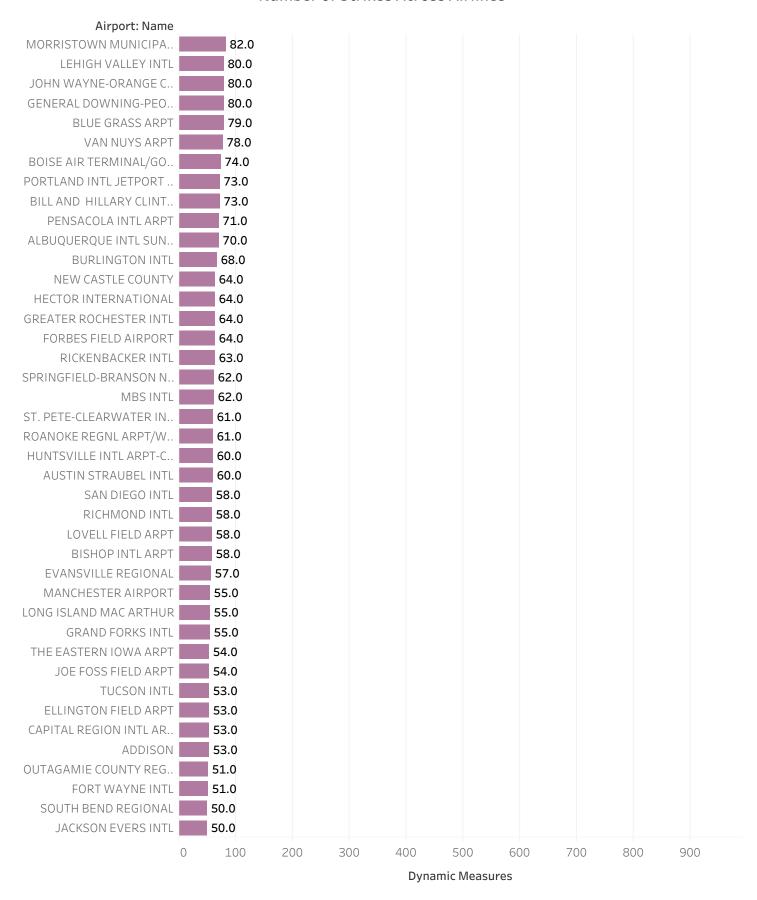
Number of Strikes Across States by Animal

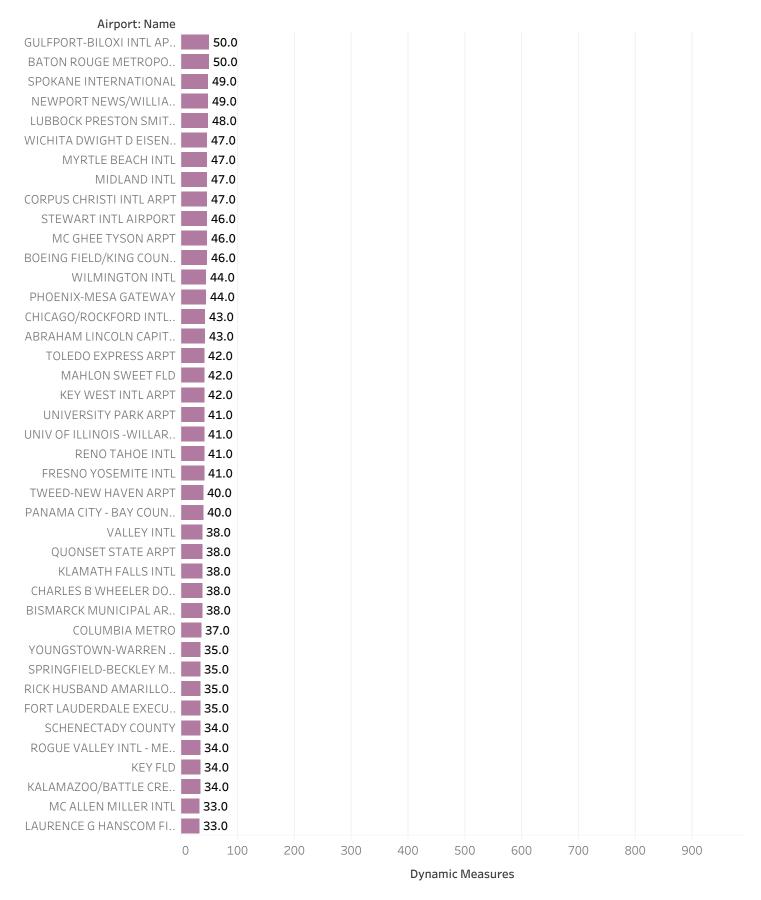


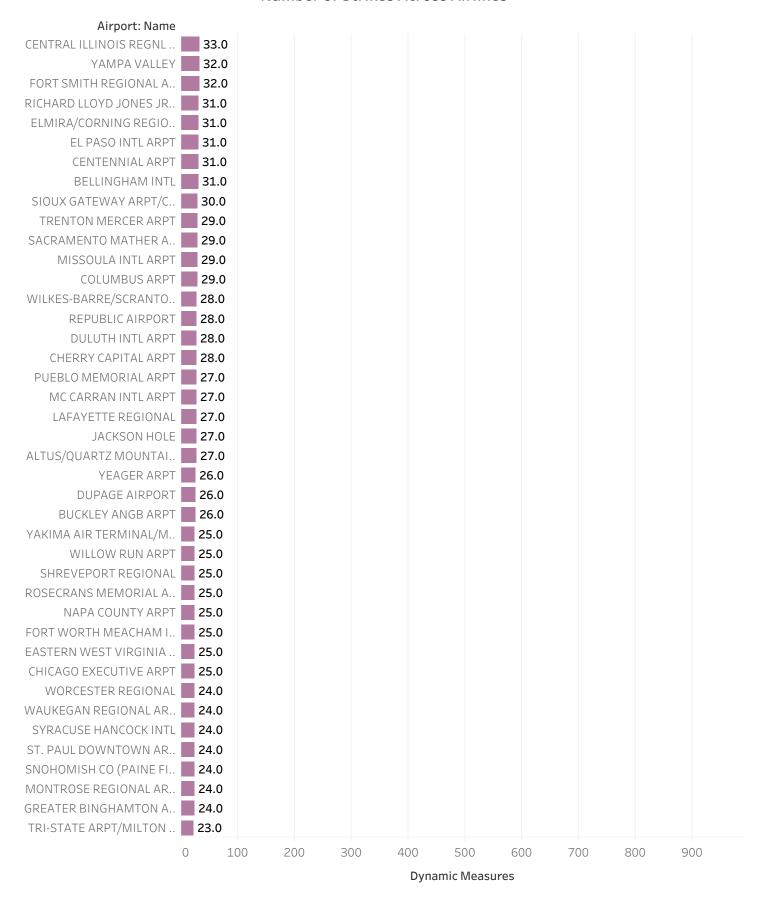
Sum of Dynamic Measures for each Wildlife: Species Order broken down by Wildlife: Animal Category. Color shows details about Wildlife: Animal Category. The view is filtered on Wildlife: Animal Category, which keeps Bats, Birds, Reptiles and Terrestrial Mammals.

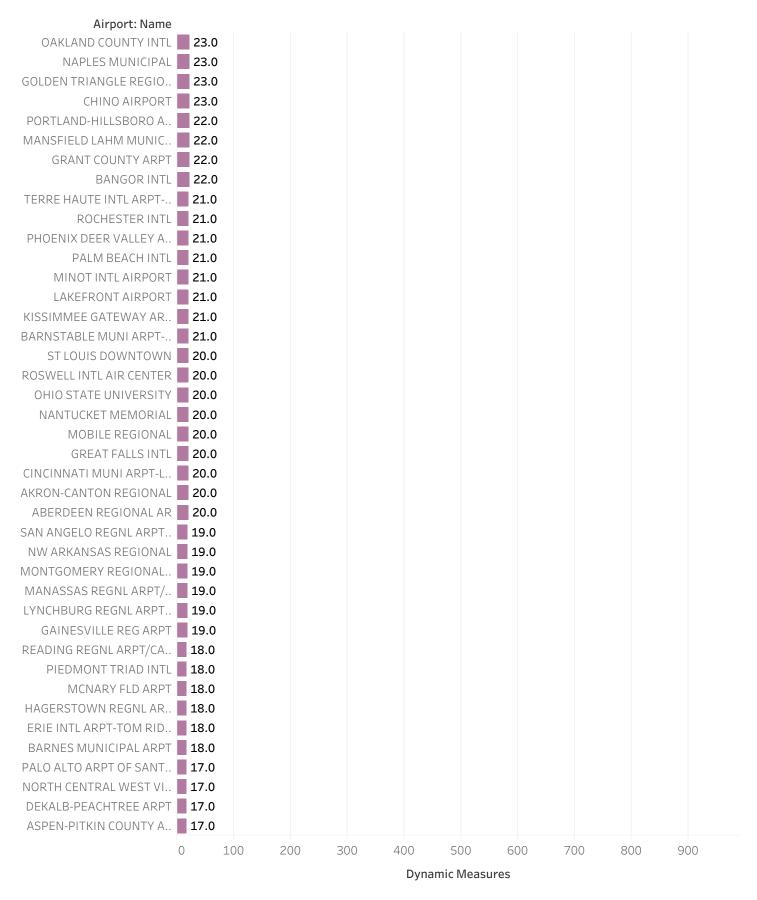


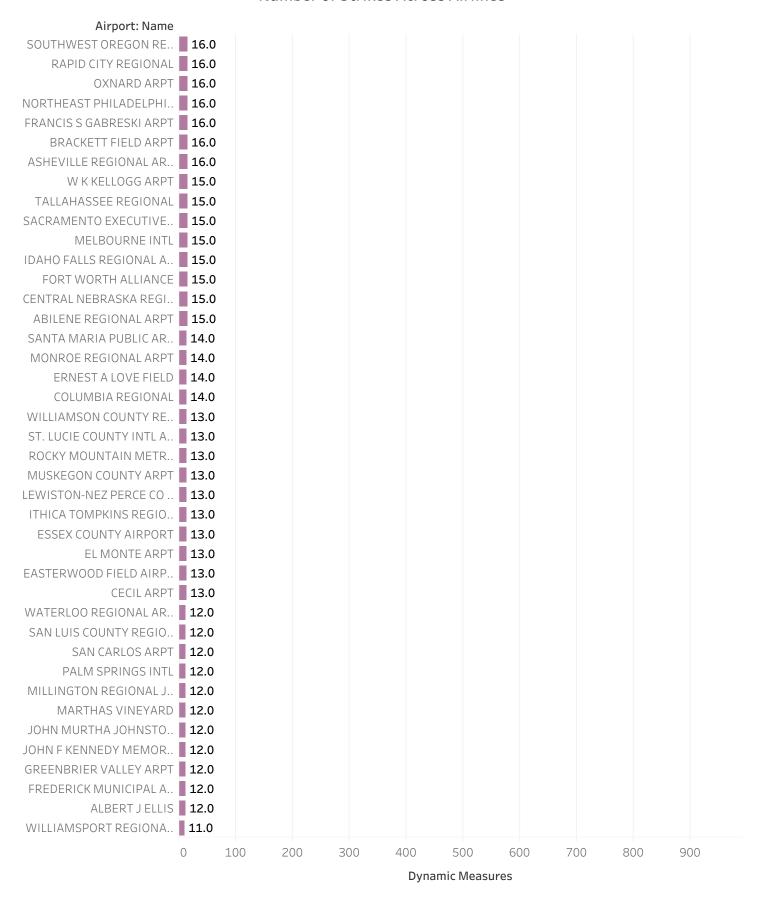


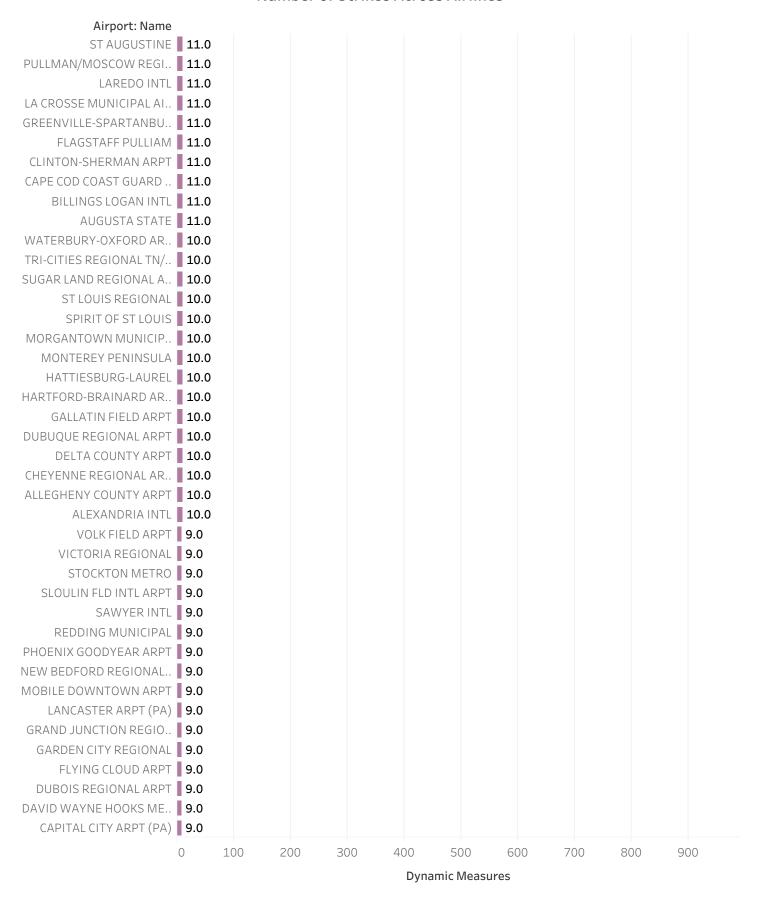


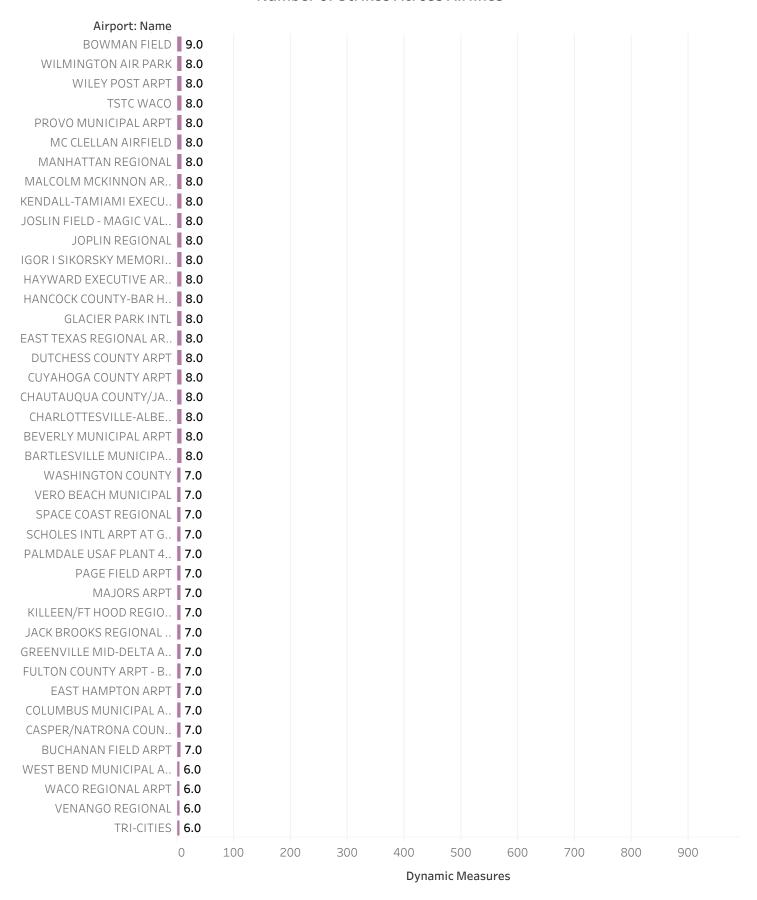


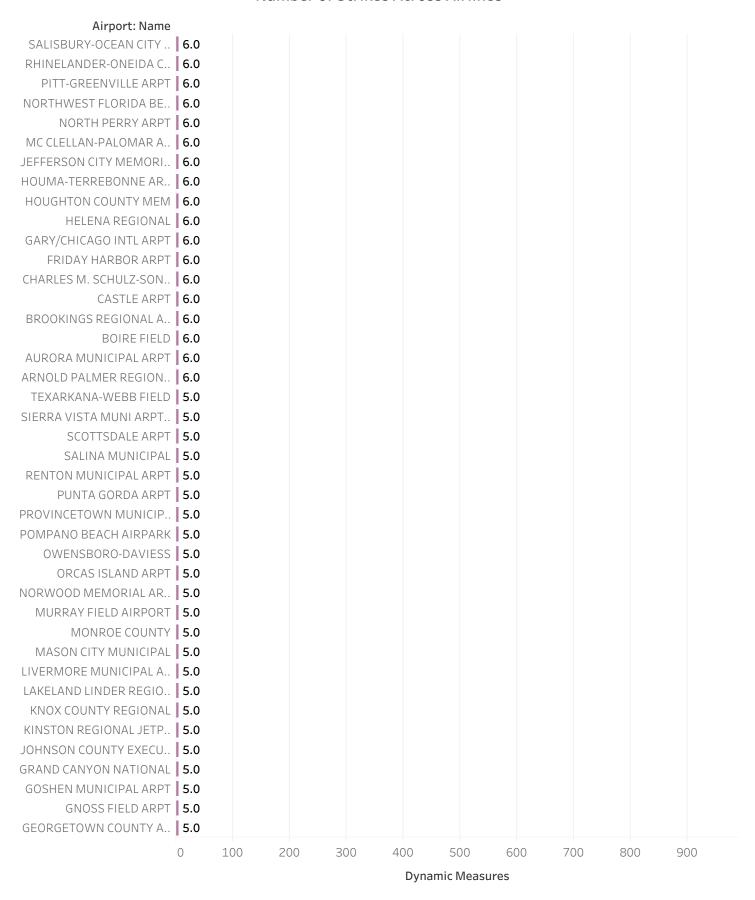


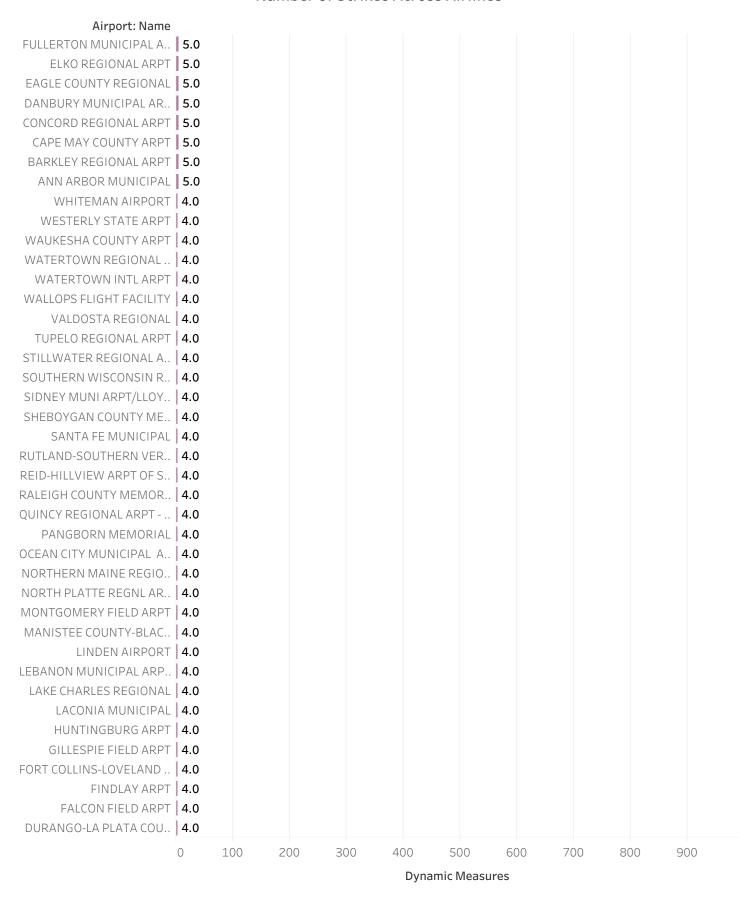






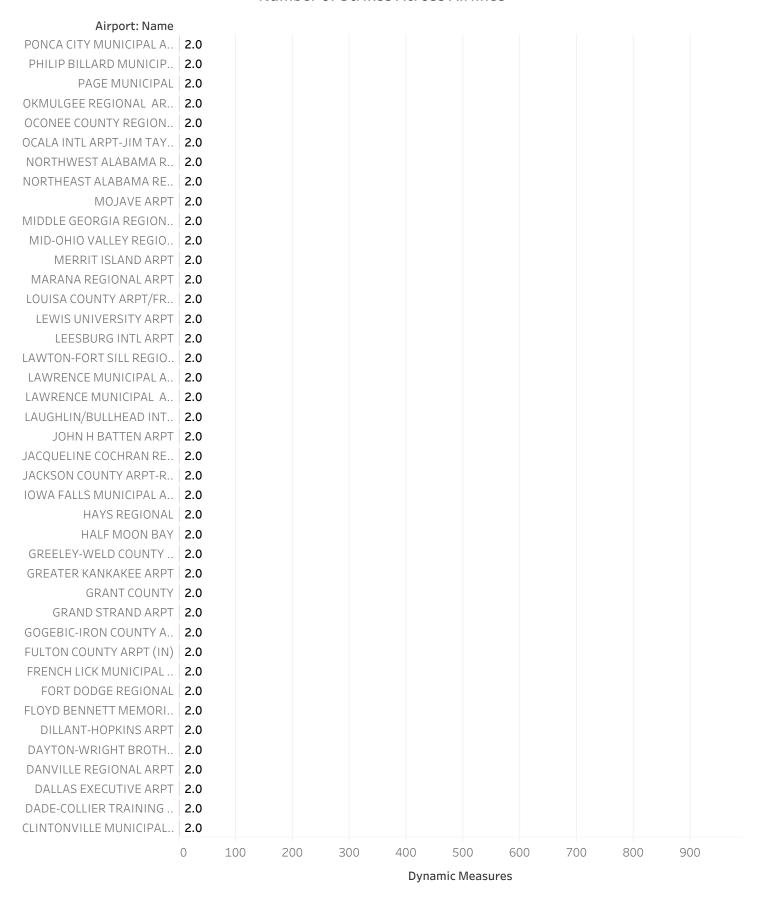






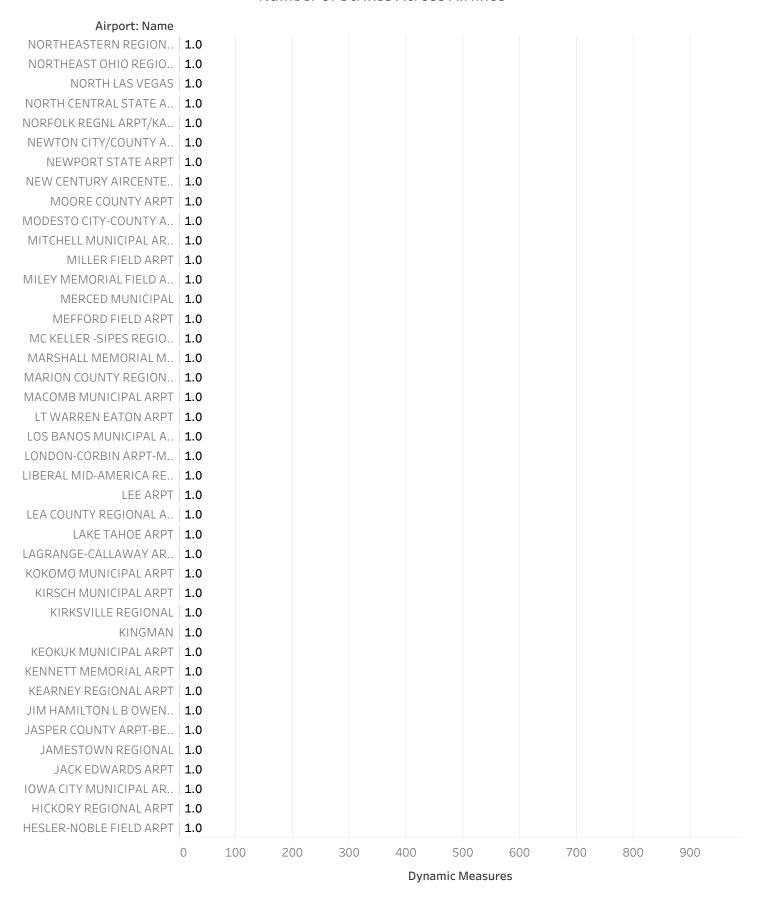




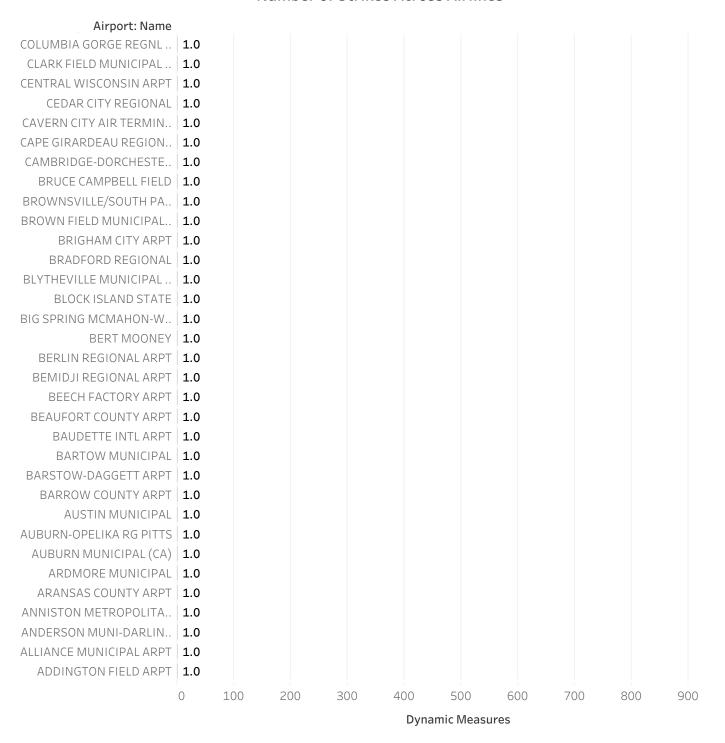


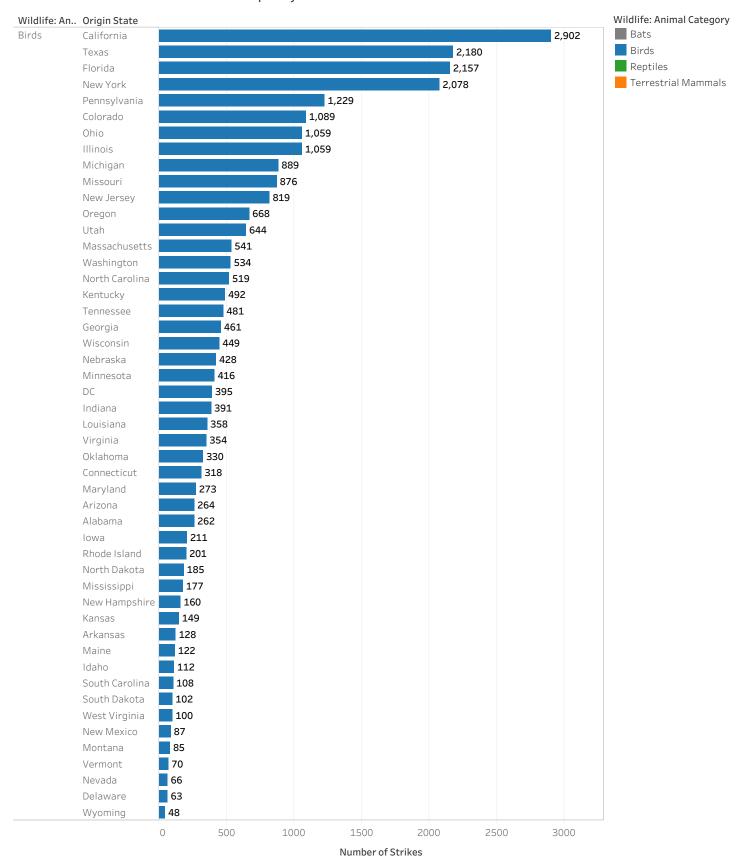




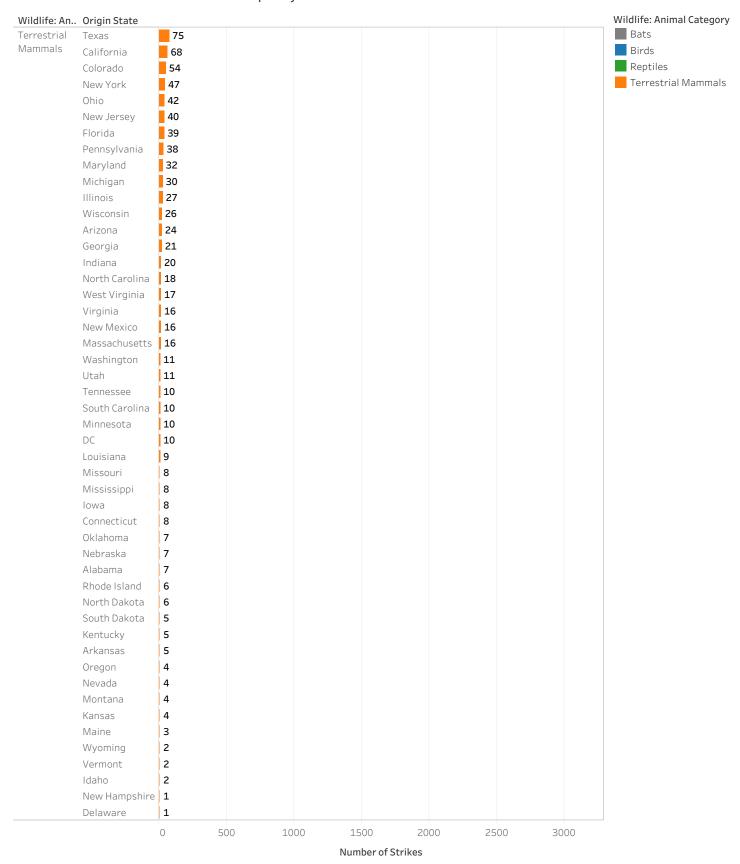




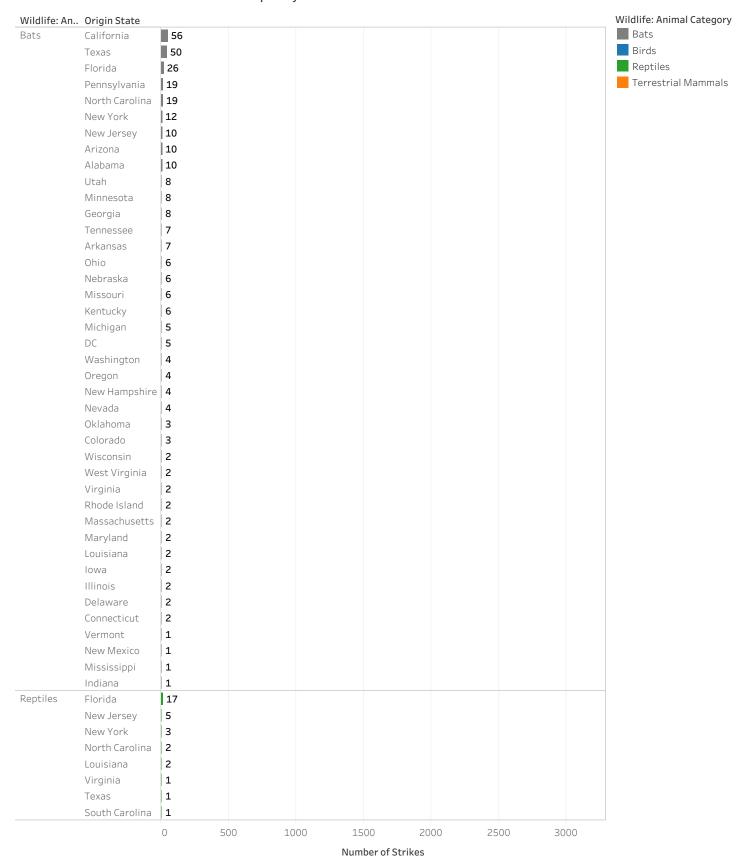




Sum of Number of Strikes for each Origin State broken down by Wildlife: Animal Category. Color shows details about Wildlife: Animal Category. The marks are labeled by sum of Number of Strikes. The data is filtered on Action (Country,Origin State) and Action (Wildlife: Animal Category). The Action (Country,Origin State) filter keeps 49 members. The Action (Wildlife: Animal Category) filter keeps 4 members. The view is filtered on Origin State, which keeps 49 of 49 members.



Sum of Number of Strikes for each Origin State broken down by Wildlife: Animal Category. Color shows details about Wildlife: Animal Category. The marks are labeled by sum of Number of Strikes. The data is filtered on Action (Country, Origin State) and Action (Wildlife: Animal Category). The Action (Country, Origin State) filter keeps 49 members. The Action (Wildlife: Animal Category) filter keeps 4 members. The view is filtered on Origin State, which keeps 49 of 49 members.

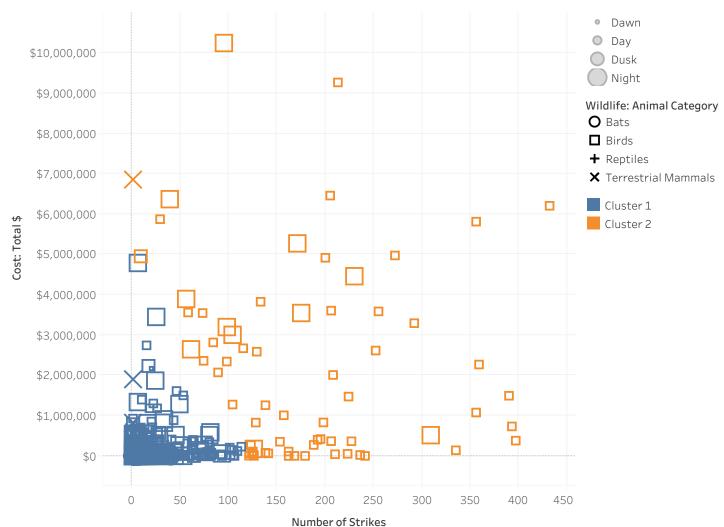


Sum of Number of Strikes for each Origin State broken down by Wildlife: Animal Category. Color shows details about Wildlife: Animal Category. The marks are labeled by sum of Number of Strikes. The data is filtered on Action (Country,Origin State) and Action (Wildlife: Animal Category). The Action (Country,Origin State) filter keeps 49 members. The Action (Wildlife: Animal Category) filter keeps 4 members. The view is filtered on Origin State, which keeps 49 of 49 members.

Wildlife: Animal Category Wildlife: An.. Origin State Bats Reptiles Michigan 1 Birds 0 500 1000 1500 2000 2500 3000 Reptiles Number of Strikes Terrestrial Mammals

Sum of Number of Strikes for each Origin State broken down by Wildlife: Animal Category. Color shows details about Wildlife: Animal Category. The marks are labeled by sum of Number of Strikes. The data is filtered on Action (Country, Origin State) and Action (Wildlife: Animal Category). The Action (Country, Origin State) filter keeps 49 members. The Action (Wildlife: Animal Category) filter keeps 4 members. The view is filtered on Origin State, which keeps 49 of 49 members.

Scatter Plot



Sum of Number of Strikes vs. sum of Cost: Total \$. Color shows details about Clusters (3). Size shows details about Time of Day. Shape shows details about Wildlife: Animal Category. Details are shown for Airport: Code. The view is filtered on Exclusions (Airport: Code, Wildlife: Animal Category) and Exclusions (Airport: Code, Time of Day, Wildlife: Animal Category). The Exclusions (Airport: Code, Wildlife: Animal Category) filter keeps 1,175 members. The Exclusions (Airport: Code, Time of Day, Wildlife: Animal Category) filter keeps 2,177 members.