

FAA Wildlife Strikes,
2015

What are strikes?
Where are they
happening?

What are the effects of
strikes?

When are strikes
occurring?

Key Takeaways,
Challenges, Future
Goals



FAA WILDLIFE STRIKES, 2015

Where can efforts be focused
to mitigate wildlife strikes?

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What are wildlife strikes?

Collisions between wildlife and aircraft.

Key Results

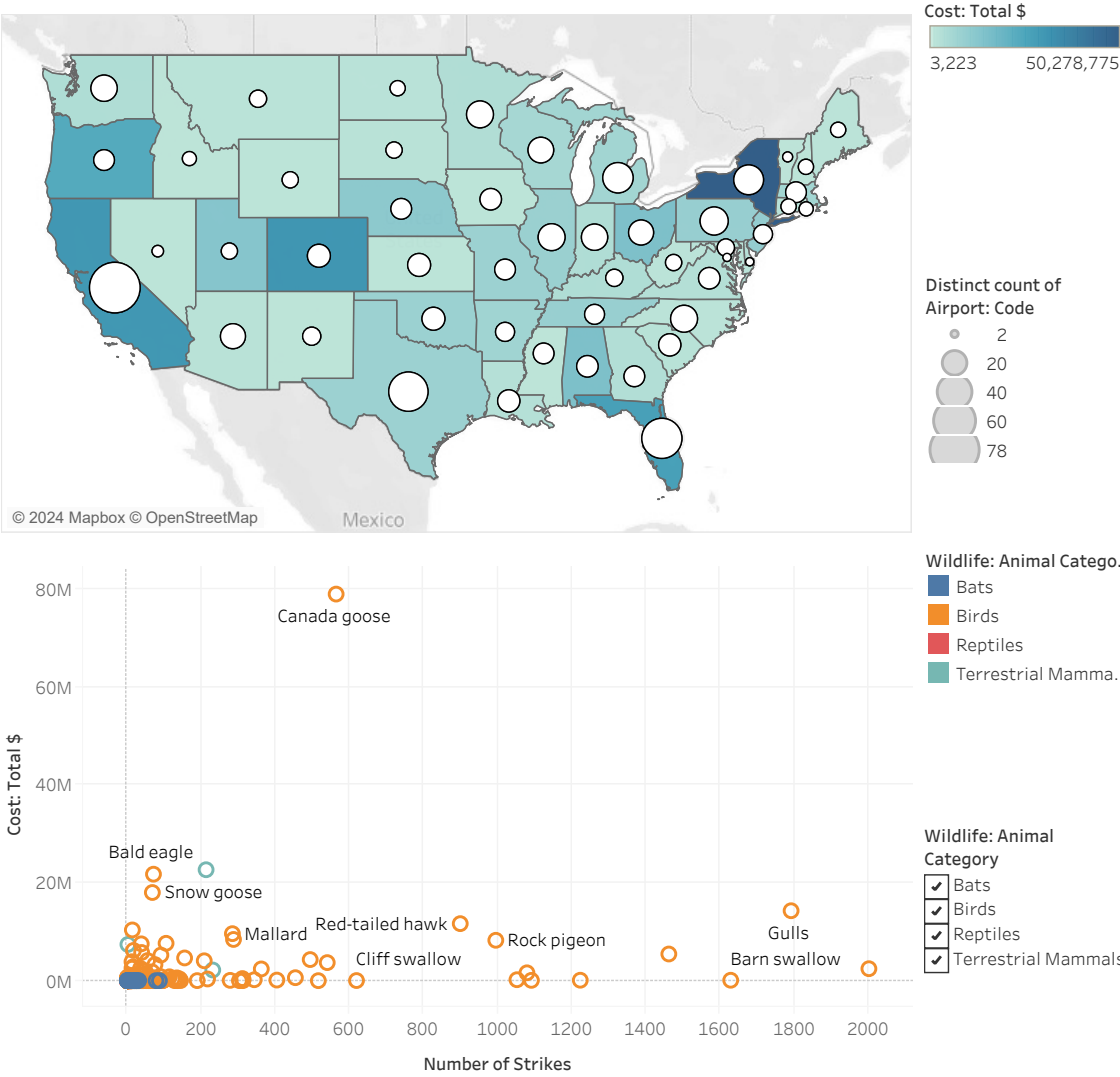
New York state has the highest dollar cost due to strikes, even though it has a similar number of airports to surrounding states like Michigan.

Birds account for most of the strikes. Some birds have a high number of strikes, their associated cost is low, e.g. Mourning dove. However, the Canada goose has only 564 strikes but causes a significant dollar cost.

Bats have fewer strikes but a similar pattern. Vesper bats have a lower number of strikes than other bats but result in a greater dollar cost.

For **terrestrial mammals**, white-tailed deer have a high number of strikes and dollar cost.

Reptile strikes are much lower and result in no recorded dollar cost.



Wildlife: Animal Category

- ☒ Bats
- ☒ Birds
- ☒ Reptiles
- ☒ Terrestrial Mammals

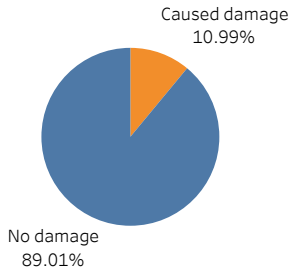
Across all animal categories only 10.99% of all strikes cause damage. However, for terrestrial mammals 27.84% of strikes cause damage.

When damage occurs it is most often classified as minor, and just over 50% of the time does not impact the flight.

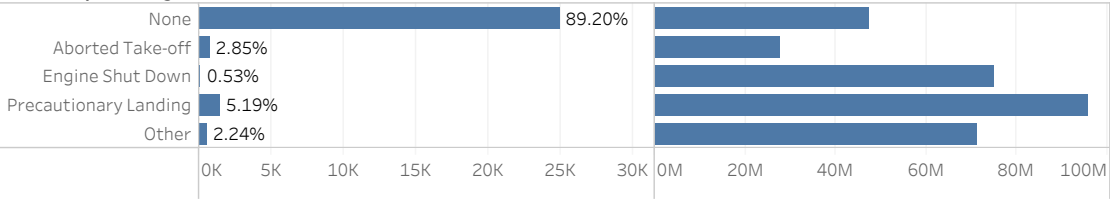
However, about 35.31% of the time, a flight may be aborted, have an engine shut down, or result in a precautionary landing.

When the damage is classified as substantial, 56.82% of flights are aborted, have engine shut down, or result in a precautionary landing.

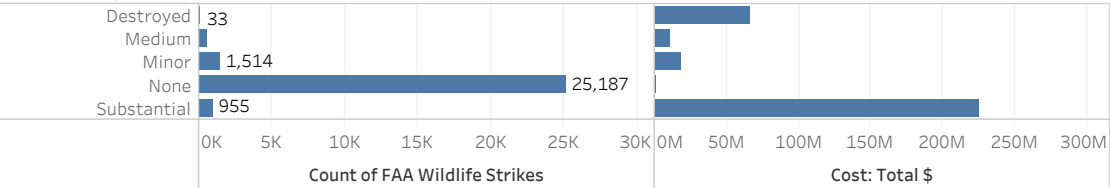
Indicated Damage



Effect: Impact to flight



Effect: Amount of damage (detailed)



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Timing of strikes

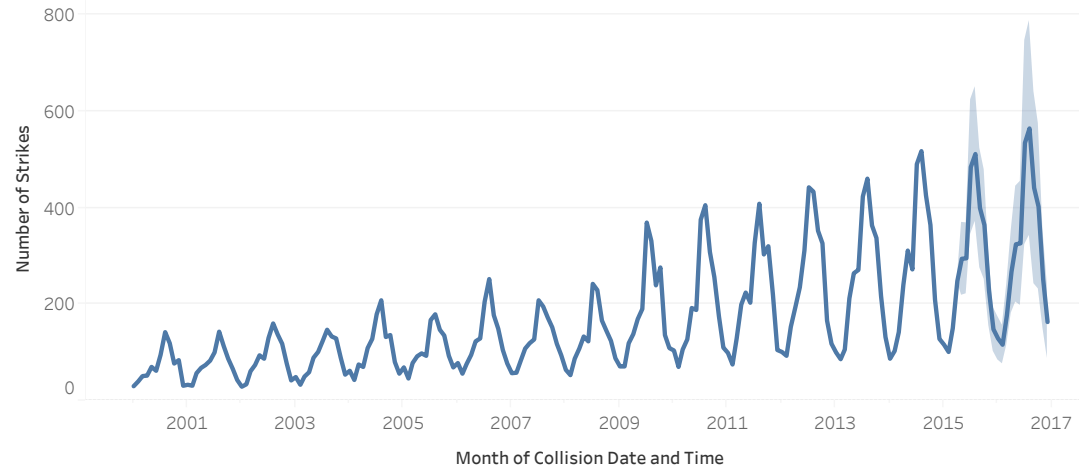
Over the years the number of strikes have increased.

Strike frequency begins to increase from the start of the year and typically peaks in the summer, before decreasing again.

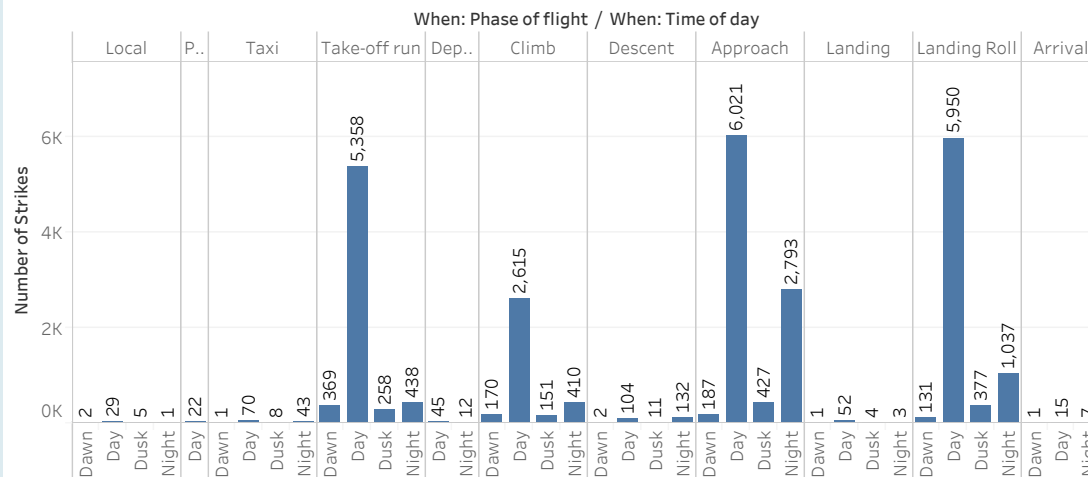
Forecasting predicts the increase will and peak pattern will continue.

On a smaller scale, most strikes occur during the day, and during the takeoff, approach, and landing roll phases of flight.

Yearly trend



Flight stage and time of day



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Key Takeaways

Focus on birds as a main priority.

Focus on key species that are outliers for strikes and cost:

Birds - Canada Goose, Mourning dove, Gulls, Barn Swallow

Bats - Vesper bats, Microbats, Brazilian free-tailed bat

Terrestrial mammals - White-tailed deer, Coyote

Focus efforts in New York, Colorado, California, Florida, and Oregon states.

Increase awareness in Spring/Summer months. FAA runs an awareness campaign to have people report strikes.

Increase awareness/checks during daytime flights.

Look into mitigation for take-off, approach, and landing roll phases of flight.

Challenges

Null values to be handled.

No explanation for classifications.

Future Goals

Add animation, images, and URLs.

Experiment with other colours and tooltips.

Update dataset.

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