Tableau_Project-1

File created on: 2023-09-26 2:27:02 p.m. EDT

 Cover
 Introduction
 Dashboard
 Conclusion
 Questions?

FINAL TABLEAU PROJECT

LHL FLEX Bootcamp - Data Analyst

FAA Wildlife Strikes



by Christian LECLERC 2023-09-26

Cover Introduction Dashboard Ouestions? Conclusion

FAA Wildlife Strikes

PROCESS



The FAA Wildlife Strike Database:

- Contains records of reported wildlife strikes since 1990.
- Strike reporting is voluntary.
- Reporting from airlines, airports, pilots, Mandatory Occurrence Reports (MOR), incident/accident information, and other sources.



https://wildlife.faa.gov/home

Assumption:

- Data represent extract from 2000 to 2015. I assume that the data has reached a point of maturation and any trend observed should be reflective of actual phenomena.





- + Expanding wildlife populations
- + Increases in number of aircraft movements



Goals:

- 1. Validate known insights and detect special trend and new insights on three categories:
 - + WHEN
 - + EFFECT
 - + WILDLIFE
- 2. Create a Dashboard in Tableau with a focus on cost of damage



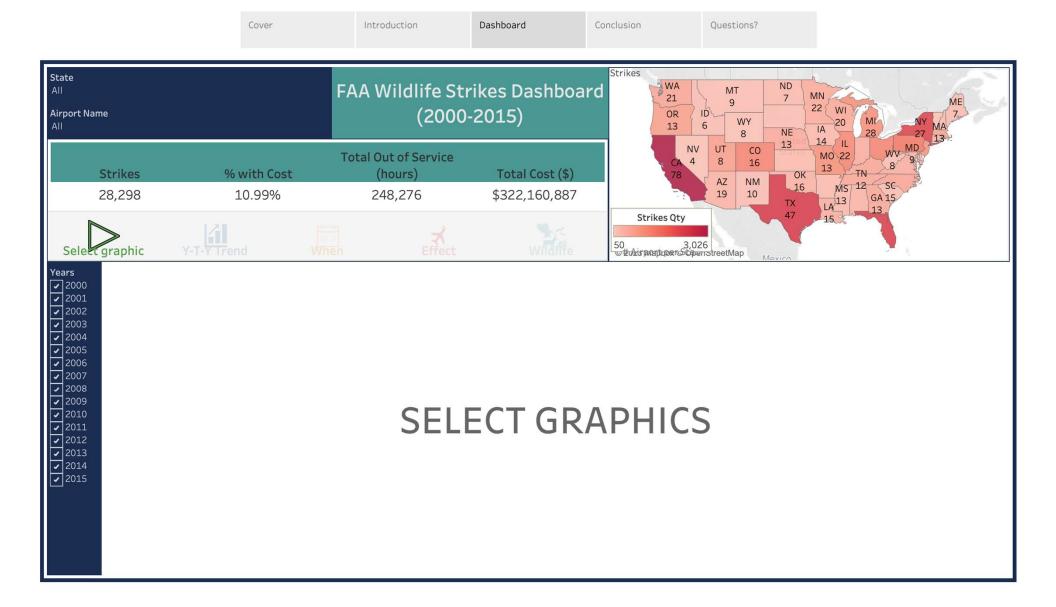












Cover Introduction Dashboard Conclusion Questions?

FAA Wildlife Strikes

What have we learned?

- Number of strikes greatly depends on human activity, specially during holidays.
- Most of the strikes happen during Day and Night, 2X more during day.
- Number of strikes increase but not that much for cost of damage (except for rare destroyed aircraft).
- Most of the damage are substantial, so the out of service hours are very high.
- Most of the strike happen during climbing.
- Canada goose are having the most impact on cost.
- Most of ducks are beeing strike at night.

Cover Introduction Dashboard Conclusion Questions?



THANKS FOR WATCHING

https://github.com/Christian-Leclerc/Tableau_Project-1.git

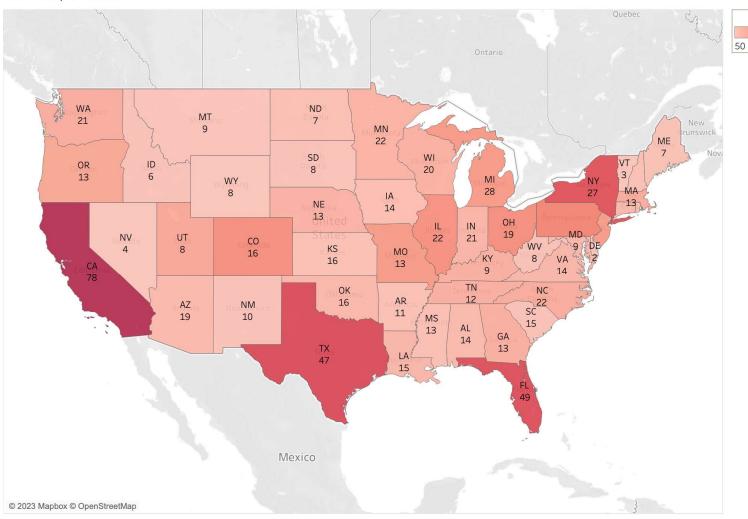
Number of Strikes



28,298 10.99% 248,276 \$322,160,887

Strikes, % with Cost, Total Out of Service (hours) and Total Cost (\$). The data is filtered on Collision DateTime Year, State and Airport Name. The Collision DateTime Year filter keeps 16 of 16 members. The State filter keeps 49 of 49 members. The Airport Name filter keeps 771 of 771 members.

Strikes per State

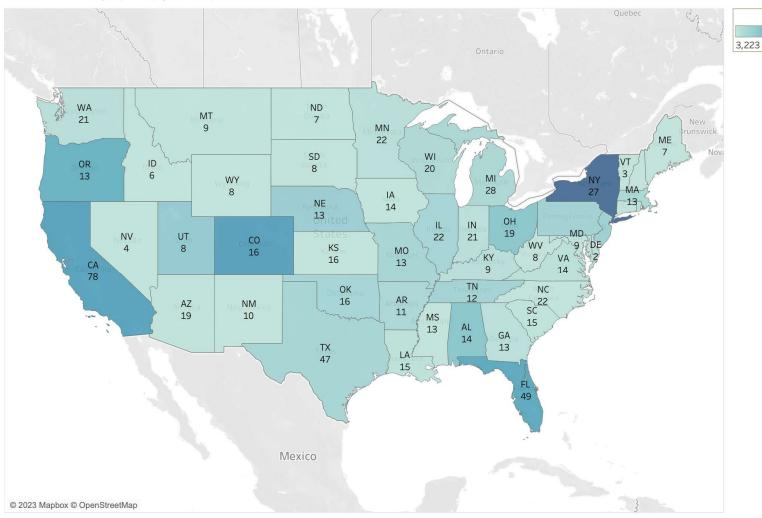


Strikes Qty

3,026

Map based on Longitude (generated) and Latitude (generated). Color shows sum of Strikes Qty. The marks are labeled by State Code and distinct count of Airport Name. Details are shown for State. The data is filtered on Collision DateTime Year, Airport Name and Action (State, State Code). The Collision DateTime Year filter keeps 16 of 16 members. The Airport Name filter keeps 771 of 771 members. The Action (State, State Code) filter keeps 49 members. The view is filtered on State, which keeps 49 of 49 members.

Cost of damage per qty of airport



Total cost

50,278,775

Map based on Longitude (generated) and Latitude (generated). Color shows sum of Total cost. The marks are labeled by State Code and distinct count of Airport Name. Details are shown for State. The data is filtered on Collision DateTime Year, Airport Name and Action (State, State Code). The Collision DateTime Year filter keeps 16 of 16 members. The Airport Name filter keeps 771 of 771 members. The Action (State, State Code) filter keeps 49 members. The view is filtered on State, which keeps 49 of 49 members.



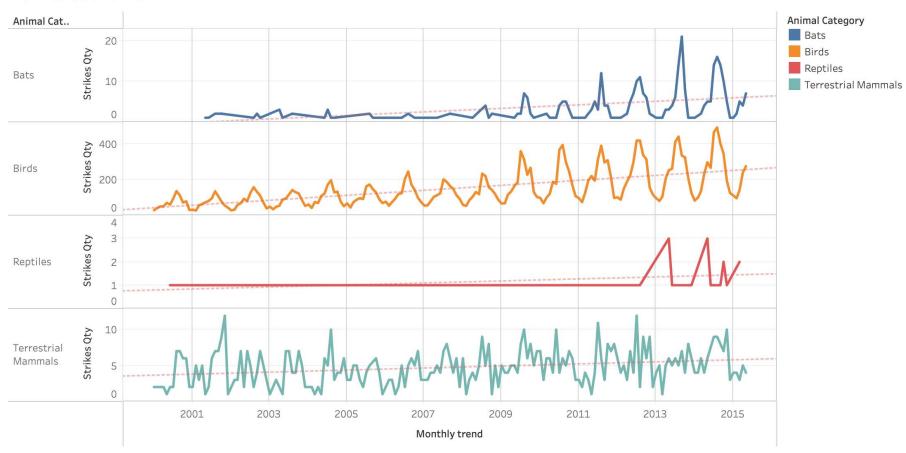
Cost per species

	. Species Order			Time of day			
		Species Group	Species	Dawn Day Dusk Night			
Birds		Caracaras, Falcons	American kestrel		-		
	Ducks, Geese, Swans, Waterfowl	Ducks	American wigeon				11
			Blue-winged teal				10
			Canvasback				
			Ducks				
			Gadwall				
			Mallard				
			Muscovy duck				
			Northern pintail				
			Northern shoveler				=
		Ducks, geese, swans	Ducks, geese, swans				
		Geese	Canada goose				
			Greater white-fronted goose				
			Snow goose				
		Swans	Trumpeter swan		-		
	Frigatebirds,	Cormorants	Double-crested cormorant				
	Cormorants, Dart		Anhinga				
	Grebes	Grebes	Western grebe				
	Gulls, Terns,	Gulls, terns, kittiwakes					
	Sandpipers, Plovers, Skimmers		Herring gull		-		
			Ring-billed gull				
			Western gull				
		Sandpipers, Curlews,	Long-billed curlew				
	Hawks, Kites, Eagles, Ospreys, Vultures	Kites, Hawks, Eagles	Bald eagle				
		, acos, ilamo, eagles	Ferruginous hawk		т		
			Hawks				
			Red-tailed hawk				
			Swainson's hawk		7		
			White-tailed kite				
		Vultures	Black vulture		÷		
		V 01 C 01 C 0	New World Vultures		-71		
			Turkey vulture				
	1	1	Common Ioon		-		_
	Loons	Loons	Great horned owl		-		_
	OWIS	OWIS					
	Deliana Haus	Havana Cavata	Snowy owl				-
	Pelicans, Herons, Egrets, Bitterns, Ibises	Herons, Egrets, Bitterns	Egrets				
			Great blue heron		•		
			Great egret				
			Yellow-crowned night-heron				
		Pelicans	American white pelican				
	Perching Birds	Meadowlarks	Eastern meadowlark				
		Starlings	European starling				
	Pigeons and Doves	Doves	Mourning dove				
		Pigeons	Rock pigeon				
Terrestrial	Canids	Wolves, Dogs, Foxes,	Coyote				
/lammals	Deer, Elk, Moose	Deer	Wapiti (elk)				
			White-tailed deer				

• 585,721 20,000,000 61,898,809 Strikes Qty

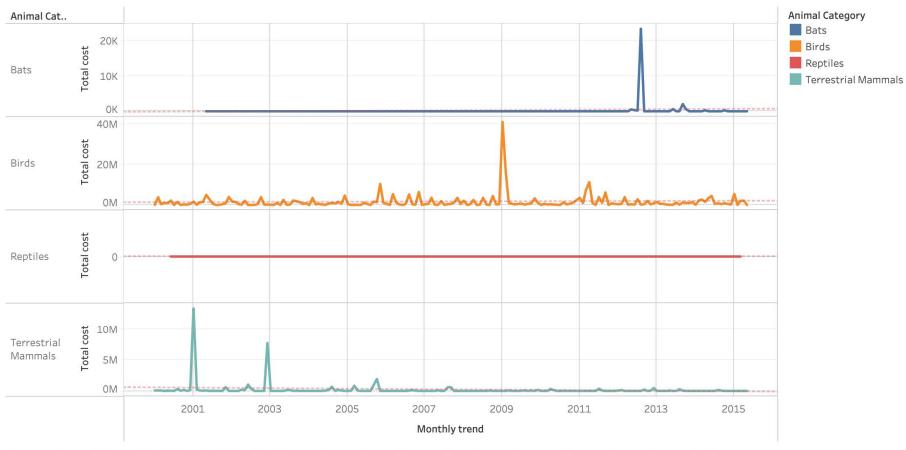
Sum of Strikes Qty (color) and sum of Total cost (size) broken down by Time of day vs. Animal Category, Species Order, Species Group and Species. The data is filtered on Collision DateTime Year, State, Airport Name and Action (State, State Code). The Collision DateTime Year filter keeps 16 of 16 members. The State filter keeps 49 of 49 members. The Airport Name filter keeps 771 of 771 members. The Action (State, State Code) filter keeps 49 members. The view is filtered on sum of Total cost, which includes values greater than or equal to 582,112.

Strikes over time

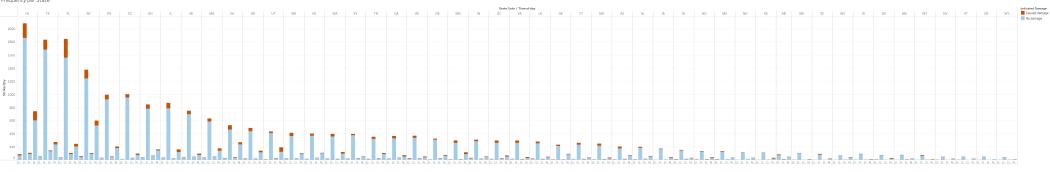


The trend of sum of Strikes Qty for Collision DateTime Month broken down by Animal Category. Color shows details about Animal Category. The data is filtered on Collision DateTime Year, State, Airport Name and Action (State, State Code). The Collision DateTime Year filter keeps 16 of 16 members. The State filter keeps 49 of 49 members. The Airport Name filter keeps 771 of 771 members. The Action (State, State Code) filter keeps 49 members.

Cost over time

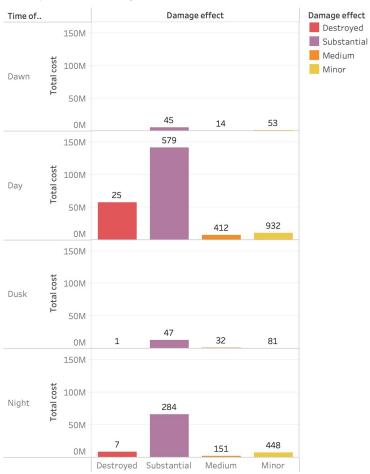


The trend of sum of Total cost for Collision DateTime Month broken down by Animal Category. Color shows details about Animal Category. The data is filtered on Collision DateTime Year, State, Airport Name and Action (State, State Code). The Collision DateTime Year filter keeps 16 of 16 members. The State filter keeps 49 of 49 members. The Airport Name filter keeps 771 of 771 members. The Action (State, State Code) filter keeps 49 members. The view is filtered on Exclusions (Animal Category, MONTH(Collision DateTime)), which keeps 482 members.



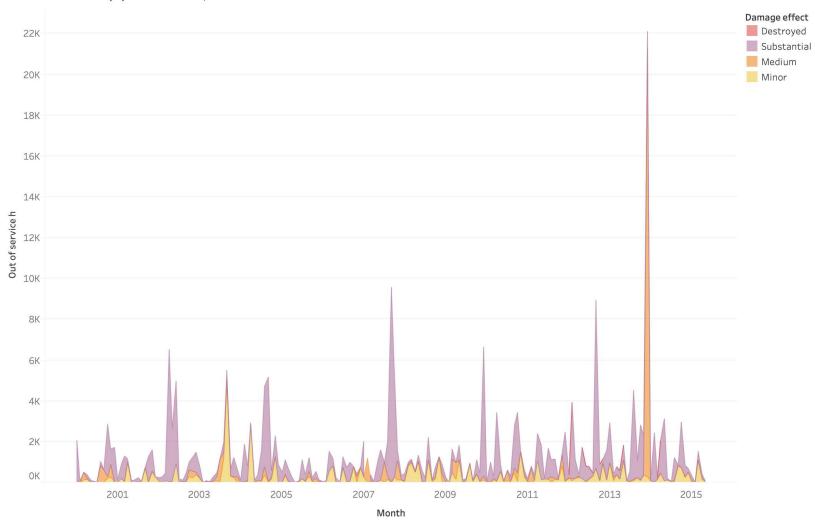
Sium of Strikes Ogs for each Time of day broken down by State Code. Color shows details about indicated Stamage. The data is filtered on Collision Data'l me Year, State, Aryzort Name and Action (State,State Code) (The Collision Data'l me' Fear (Fitter lenges 36 or 36 members. The State filter keeps 40 members. The State filter keeps 40 members. The Aryzort Name filter keeps 71 or 721 members. The Aryzort Name filter keeps 71 or 721 members. The Aryzort Name filter keeps 70 or 72 or 721 members. The Aryzort Name filter keeps 71 or 721 members. The Aryzort Name filter keeps 71 or 721 members. The Aryzort Name filter keeps 71 or 721 or 721 members. The Aryzort Name filter keeps 72 or 72 or 721 members. The Aryzort Name filter keeps 72 or 72 or 721 members. The Aryzort Name filter keeps 72 or 72 or 721 members. The Aryzort Name filter keeps 72 or 72 or 721 members. The Aryzort Name filter keeps 72 or 72

Cost per time of day



Sum of Total cost for each Damage effect broken down by Time of day. Color shows details about Damage effect. The marks are labeled by sum of Strikes Qty. The data is filtered on Collision DateTime Year, State, Airport Name and Action (State, State Code). The Collision DateTime Year filter keeps 16 of 16 members. The State filter keeps 49 of 49 members. The Airport Name filter keeps 771 of 771 members. The Action (State, State Code) filter keeps 49 members. The view is filtered on Damage effect, which keeps Destroyed, Medium, Minor and Substantial.

Out of service (h) over time per effect



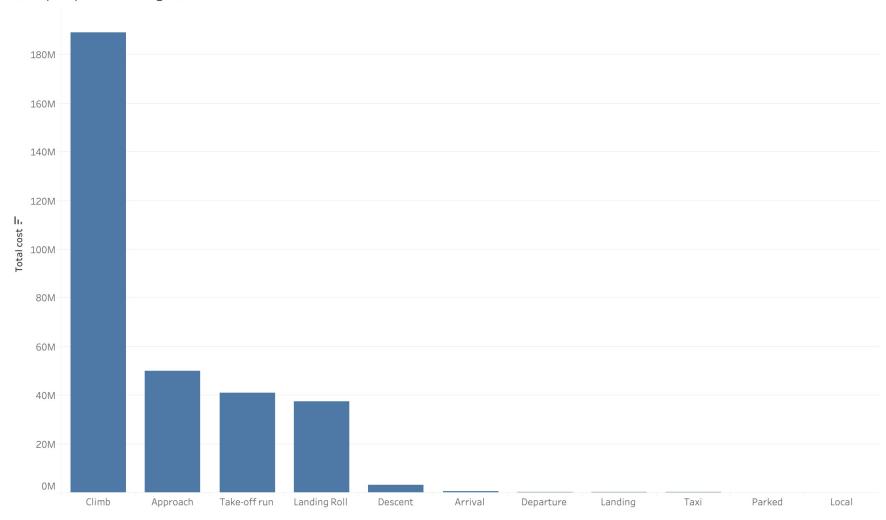
The plot of sum of Out of service h for Collision DateTime Month. Color shows details about Damage effect. The data is filtered on Collision DateTime Year, State and Airport Name. The Collision DateTime Year filter keeps 16 of 16 members. The State filter keeps 49 of 49 members. The Airport Name filter keeps 771 of 771 members. The view is filtered on Damage effect, which keeps Destroyed, Medium, Minor and Substantial.

Distribution of effect per category

Animal Category	Destroyed	Substantial	Medium	Minor	None	Destroyed
Bats	1				331	Substantial
Birds	25	866	584	1,400	24,214	Medium
Reptiles					33	Minor
Terrestrial Mammals	7	89	25	114	609	None

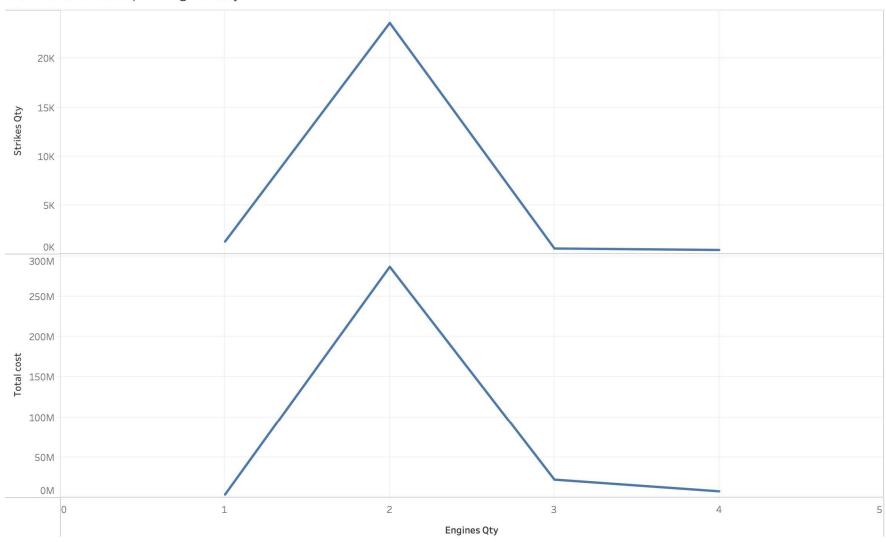
Sum of Strikes Qty broken down by Damage effect vs. Animal Category. Color shows details about Damage effect. The data is filtered on Collision DateTime Year, State, Airport Name and Action (State, State Code). The Collision DateTime Year filter keeps 16 of 16 members. The State filter keeps 49 of 49 members. The Airport Name filter keeps 771 of 771 members. The Action (State, State Code) filter keeps 49 members.

Cost per phase of flight



Sum of Total cost for each Phase of flight. The data is filtered on Collision DateTime Year, State, Airport Name and Action (State, State Code). The Collision DateTime Year filter keeps 16 of 16 members. The State filter keeps 49 of 49 members. The Airport Name filter keeps 771 of 771 members. The Action (State, State Code) filter keeps 49 members. The view is filtered on Phase of flight, which excludes Null.

Strikes and Cost per Engine Qty



The trends of sum of Strikes Qty and sum of Total cost for Engines Qty. The data is filtered on Collision DateTime Year, State and Airport Name. The Collision DateTime Year filter keeps 16 of 16 members. The State filter keeps 49 of 49 members. The Airport Name filter keeps 771 of 771 members. The view is filtered on Engines Qty, which keeps non-Null values only.